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ABSTRACT

Five papers and 14 forum/workshop summaries from the 1982 Creative Responses to Changing Realities Conference are presented. The following papers and authors are included: "Global Interdependence: From Exploitation to Partnership" (Denis Goulet); "Our Changing World--New Curriculums and New Delivery Systems" (Donald Leu); "Education and Business: A Joint Responsibility" (John Elorriaga); and "From Barriers to Partnerships" (Paul D. Lintner). Additionally, forum/workshop summaries cover the following topics: "Global Interdependence: Education's Role"; "Prior Learning Experience Programs: Quality Issues and Answers"; "The Work Ethic: Yesterday and Today"; "Quality Circles and Productivity"; "Our Changing World--New Curriculums and Delivery Systems"; "Teaching Adults in the Workplace: Designing Programs that Management Can Support"; "Increasing Student Options through Creative Partnerships between the Secondary School and the Community College"; "Computer Literacy for the Workplace: A 'Low Tech' Alternative"; "Education and Business--A Joint Responsibility"; "Action Planning Strategies"; "Computerized Guidance and Information Systems"; "High Technology Partnerships"; "Machiavellian Diplomacy in Modern Dress: Articulation and Transfer between Postsecondary Institutions"; "Effective Learning Style Utilization." (SW)

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conference proceedings

CREATIVE RESPONSES TO CHANGING REALITIES

A Conference for Northwest Postsecondary and Higher Education

October 28-29, 1982
Hilton Hotel
Portland, Oregon

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Partnerships, Programs and Practices for an Increasingly Interdependent World

The Second Annual

Creative Responses To Changing Realities

Conference for Northwest Postsecondary and Higher Education

October 28-29, 1982 Hilton Hotel Portland, Oregon

The Creative Responses Conference held in October of 1982 provided participants with opportunities to explore a variety of successful approaches to the rapidly changing realities of postsecondary and higher education. The purpose of this proceedings book is to provide a permanent record of presentations, workshops and other information which can serve as an ongoing reference. It is hoped that participants, presenters and the Conference co-sponsors as well as these materials will be seen as possible future resources. This document is also offered as part of the process of achieving one of the Conference's main goals: To encourage action planning which could enable effective adaptation of potential responses to the realities of different campuses. Suggestions regarding content, format and other considerations for future conferences are welcome and should be forwarded to one of the co-sponsors.

Conference Cosponsors:

Northwest Regional Educational Laboratory

Northwest Program Development and Coordination Center

Conference Coordinator: Michael Gordon, Highline Community College,
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Midway, Washington 98031, (206) 433-8590

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PROGRAM Second Annual Creative Responses to Changing Realities Conference

Partnerships, Programs, and Practices for an Increasingly Interdependent World

Thursday, October 28, 1982

8:30 A.M. Registration, coffee, rolls

9:00 A.M. Opening Session

SPEAKER: Denis Goulet, O'Neill Professor of Education for Justice, University of Notre Dame

Global Interdependence: from Exploitation to Partnership

Interdependence is not always a good thing. At times it is vertical, at others, horizontal. Third World nations now demand greater reciprocity in their dealings with wealthier, more powerful nations. They criticize present relations, as these govern the circulation of ideas, people and resources, as inequitable and insulting.

9:45 A.M. Coffee

10:00 A.M. Concurrent Workshops (Series A)

A1 Global Interdependence: Education's Role
Forum with Denis Goulet

Facilitators: *Mathilda Harris, Coordinator of International Education, Mount Hood Community College; Chair, Pacific Northwest International/Intercultural Education Consortium; and Ernst Goblert, Director of the Spokane Consortium for International Studies; Professor of Government, Eastern Washington University*

A2 Prior Learning Experience Programs: Quality Issues and Answers

This workshop will define academic and administrative issues related to Prior Learning Experience (PLE), Program preassessment processes, portfolio development and evaluation. The questions these issues raise will be addressed both theoretically and practically. Future directions towards improvement of quality, specifically the use of management information systems, will be discussed. *Joan S. Malling, Director, Prior Learning Experience Program and Management Information System, Marylhurst Education Center, and Jeff ?. Sweeney, Instructor, Prior Learning Experience Program, Marylhurst Education Center*

A3 The Work Ethic: Yesterday and Today

Many commentators use the fate of the work ethic to assess the fate of the country. Americans have an almost unique set of attitudes toward work which alternately amuses and puzzles the rest of the world. This session will examine the roots of that complex of values which is loosely called the work ethic. *Dennis Peters, Instructor in Humanities, Shoreline Community College*

A4 Quality Circles and Productivity

In 1981, Lane Community College established the nation's first collegiate Productivity Center to implement Quality Circles and productivity measurements. The circles have caused improved work environments, with the by product of increased productivity. Workshop participants will get actual practice with circle techniques. *Casey Fast, Director, Productivity Center, Lane Community College*

12:30 P.M. Lunch

SPEAKER: Donald J. Leu, Dean of the School of Education, Portland State University

Our Changing World—New Curriculums and New Delivery Systems

Our socioeconomic-political-technical world is changing rapidly, resulting in significant educational changes. The current curriculum in Science and High Technology will be outlined along with major changes needed in High Technology and in the Total curriculum. Public education will be described and linked with other educational delivery systems.

2:00 P.M. Concurrent Workshops (Series B)

B1 Our Changing World—New Curriculums and New Delivery Systems
Forum with Donald J. Leu

Facilitators: *Patricia Justice, Dean of Instruction, Fort Steilacoom Community College; and Dale Green, Associate Dean of Instruction, Fort Steilacoom Community College*

B2 Teaching Adults in the Workplace: Designing Programs That Management Can Support

This workshop has two components. The first will feature a lecturette on how to generate management support for training activities in the workplace. Participants will role play presentations to management. The second will present a guide to training design. *Marilyn Clark, Coordinator, Adult Career Development and Learning, Education and Work Program, Northwest Regional Educational Laboratory*

B3 Increasing Student Options Through Creative Partnerships Between the Secondary School and the Community College

Creative practices in joint enrollment curriculum development and staffing with community colleges are emerging to help offer students the kinds of opportunities they need without spending additional money. Participants will hear some of these practices, as well as join in the identification of priority issues. *Rex Hagans, Director, Instructional Improvement Division, Northwest Regional Educational Laboratory; John Pendergrass, Region Vocational Education/Career Education Coordinator, Washington County (Oregon) Education Service District; and Don Fiser, Director, The Institute for Community Assistance, Portland Community College*

B4 Computer Literacy for the Workplace: A "Low Tech" Alternative

The U.S. Department of Labor projects that by 1985, 75 percent of all jobs will be computer related. Most workers, then, will need to be computer literate: Comfortable in using computers to solve problems, store and retrieve information, process words, manipulate data. Training programs are needed to give people this entry level "computer literacy for the workplace." *Judith Edwards Allen, Director of Computer Technology Program, Northwest Regional Educational Laboratory*

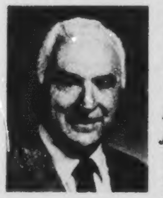
Friday, October 29, 1982

8:15 A.M. Breakfast

SPEAKER: Tom Olson, Director of the Division of Planning and Service Coordination, Northwest Regional Educational Laboratory

Action Planning Strategies

9:00 A.M.



SPEAKER: John Elorriaga, President and Chairman of the Board, U.S. Bancorp; Chairman, Governor's Economic Recovery Council of Oregon

Education and Business—A Joint Responsibility

If business is going to meet the challenge of a fast changing present and an uncertain future, we need the greatest minds available. We need innovation; we need technical skills; and we need creativity. Business needs to work closely with the educational community and to coordinate our efforts.

9:30 A.M. Concurrent Workshops (Series C)

C1 Education and Business—A Joint Responsibility
Forum with John Elorriaga

Facilitators: *Bob Archibald, Director of Cooperative Education, Portland Community College; and Don Fiser, Director, The Institute for Community Assistance, Portland Community College*

C2 Action Planning Strategies

Participants will have the opportunity for more indepth followup on the breakfast presentation. What are specific planning strategies which can be used in postsecondary education? Who needs to be involved? What are their roles? What resources are available for action planning? *Tom Olson, Director, Division of Planning and Service Coordination, Northwest Regional Educational Laboratory*

C3 Computerized Guidance and Information Systems

This workshop will provide an overview of four computerized guidance and information systems currently used in the Northwest: CIS, Discover, SIGI and Encore. One particular program, Encore, will be presented in depth. *Valerie McIntyre, Regional Manager, Northwest Council for the Advancement of Experiential Learning*

12:00 P.M. Lunch

SPEAKER: Paul Lintner, President, Electro Scientific Industries; Chairman, American Electronics Association (AEA); Member, AEA Higher Education Committee

High Technology Partnerships

Problems and barriers of turfdom are coming to an end in Oregon and nationwide. High tech business leaders, educators, and legislators are talking and planning—forced by the need of economic recovery and the fact that industry has collected funds to match money allocated by the Oregon legislature. Industry must realize the needs and drives of educators and legislators. Educators should realize that Hi Tech Industry is a customer. Educators are the suppliers of a product—well trained students.

1:30 P.M. Concurrent Workshops (Series D)

D1 High Technology Partnerships
Forum with Paul Lintner

Facilitators: *Forrest Rodgers, Director of Marketing, Marylhurst Education Center; and Angel Pilato, Manager of Corporate Education, Tektronix, Inc.*

D2 Machiavellian Diplomacy in Modern Dress: Articulation and Transfer Between Postsecondary Institutions

This workshop will focus on different models of articulation and transfer between institutions of higher learning, from state mandated integrated systems to voluntary agreements and understandings. Particular attention will be focused on current efforts within Washington State to resolve difficulties in a voluntary process. *George A. Delaney, Dean of Educational Services, Skagit Valley College; and Cal Mathews, Coordinator of College Relations, Western Washington University*

D3 Effective Learning Style Utilization

Students learn in a variety of ways. Effective instruction takes this into account by recognizing individual differences. This workshop will help participants to identify particular learning styles and to design classroom presentations and materials which will be responsive to these styles. *Joe Youngbluth, Counselor and Instructor in Psychology, Mount Hood Community College*

The Second Annual Creative Responses to Changing Realities Conference presented many excellent challenging partnership ideas between education and community resources. The speakers and presenters were well chosen and the interaction among peers most stimulating. I am going away with some good ideas I want to explore further.

Ann Toth, Director
Cooperative Education
Highline Community College
Midway, Washington

DENIS GOULET
PROFESSOR OF EDUCATION FOR JUSTICE
UNIVERSITY OF NOTRE DAME

Thursday, October 28, 1982 9:00 A.M.

Introduced by: Dr. Ernst Gohlert, Director of the Spokane Consortium for International Studies, Professor of Government, Eastern Washington University

GLOBAL INTERDEPENDENCE: FROM EXPLOITATION TO PARTNERSHIP

This is my first visit to Portland. I've been here since Monday, and I haven't seen the sun or the mountains yet. So, maybe it was a trick to make me come back. Well, I am pleased to meet with you, and what I'd like to do now is just to offer a few brief reflections on issues of global interdependence, basically just as a seed sowing operation, and then we will repair to the workshops and hopefully have a little more chance for exchange about it.

It does seem rather self-evident particularly in the light of Ernie's mention of a recent decision of a Spokane firm to export jobs to Taiwan, but it may be worth repeating, nonetheless, that global interdevelopment is not just some abstract word or some pious wish; it is a fact. Any corporate management knows that production has been internationalized. Marketing is internationalized. All kinds of political decisions taken in far away places need to be known very soon for corporate decision makers to make their own choices. So interdevelopment is a fact. And even though certain politicians or government bureaucrats may somewhat fuzz over the facts--I was rather amazed the other day when Secretary George Schultz coming back from Canada said, "Well, you don't tell us what to do and we won't tell you what to do," a rather stupid remark when you consider that Canada wasn't try to tell the United States what to do. It was trying to ask the United States not to export acid rain. And clearly Reagan is trying to tell the Soviets what to do or not to do in Afghanistan or Poland and nobody thinks that's wrong. The German elections are not just a domestic problem. When Schmidt goes out and Genscher takes away the Free Democratic coalition with him, this creates a whole new chemistry of internal German politics that has enormous implications for U.S. dealings with the Soviet Union, U.S. dealings with NATO alliance partners, the possibility or impossibility of their deploying missiles--that decision that was taken a couple of years ago and is now scheduled for next year. As though we needed reminders, with the collapse of the Mexican Peso, all of a sudden you have a condition, just a situation that forces many, many tens of thousands of Mexican agricultural workers to try to cross the border illegally and find jobs in the United States, notwithstanding the U.S.'s new immigration policy limiting it to a certain flow. So it just seems to me that we cannot doubt that interdependence of all kinds is a fact.

This leads me to my second point. The key question is what is the quality of that interdependence? A few years ago I published a little monograph of the Overseas Development Council entitled, "World

Interdependence: Verbal Smokescreen or New Ethic?" And the very title reflects the concern of many Third World officials or scholars or ordinary development practitioners that a lot of talk in international circles about global interdependence really is a verbal smokescreen. It really is a linguistic gimmick to hide certain patterns of exploitation or at least paternalism. Now I think we have to constantly disaggregate the interdepencies that we can witness and simply ask ourselves, "What is the quality of that interdependence? Is it basically horizontal--mutual and reciprocal? Or is it more vertical and hierarchical?" And, you know, dominator and dominated. The Chinese were fond of contrasting two different images to capture these respective qualities of vertical and horizontal interdependence. One image was horse and rider. Clearly horse and rider are interdependent, but someone is on top and getting a free ride; someone is underneath and straining and sweating and getting tired. Now the other image is two oarsmen rowing the boat. So obviously the quality of global interdependence is really what is at issue. And even as Barbara Ward was fond of saying, before she died unfortunately two years ago, it is true that we live in a global village, but in the global village are all of the decisions made by small number of village elders with no respect for the wish of the villagers? In '73, '74, with the increase in oil prices--300 percent, 400 percent within a couple of months--what was the quality of the interdependence between Europe (particularly France and Germany) and the oil producers? You know, how vertical or horizontal it was--quite largely vertical. It led to a considerable shift in the policy stances of France and Germany, particularly toward Israel, toward the Palestine Liberation organizations. So this suggests different qualities of vulnerability or control.

Now it's not just the material dependency on the supply of a resource that shakes it. For instance, Japan depended practically 100 percent for its fossil fuel from imports from the outside. But because they have other leverage points in terms of markets and financing and technical assistance, in a sense they came closer to having a more horizontal, mutual relationship--even with their oil suppliers than France did. You might say that Brazil would have caught itself somewhere in between. Brazil produces about 40 percent of its own oil but imports its oil from quite a highly diversified array of countries--Venezuela, Nigeria, Iraq, Saudi Arabia, Algeria--so that they were able to make up most of their losses from Iraq and Iran by passing new contracts with Nigeria and Venezuela.

So you see that a policy of selective linking and de-linking in specific arenas, either trade, or cultural exchange, if you're a country that receives many, many students (I believe that over 300,000 foreign students are now studying in U.S. colleges and universities--a heavy block of them are from a small number of Arab countries; a very, very large block of them are from Nigeria), creates certain kinds of links that do have their effect in other policy arenas--arenas of investment, arenas of tourism, arenas of trade arrangements--to say nothing of military or security arenas. So we get a view of how really complex the quality of interdependence can be once we look at particular issues like this.

So that's why I'm suggesting that it is useful to disaggregate and come down from the generalities and try to take the pulse, if you will, of what are the qualities and characteristics of different interdependencies. The Falkland Islands crisis now is over, but while it was going on, many people thought that this could very well lead to an enormous shift in the Soviet role in the South Atlantic, and the internal Argentine government was so unstable and so vulnerable to domestic pressure that it might find itself attracted to radically break its alliances with the Western Hemisphere system and to least establish active neutrality with the Soviet Union. Paradoxically, you know Argentina has one of the most anti-communist governments. But there's nothing very unusual about an internal anti-communist government having external alliances. That's the problem of Syria and Iraq. At the same time as they are receiving large quantities of Soviet arms and welcoming Soviet military advisors and even technical economic advisors, they are imprisoning local communists and censoring local communist party activities. So the ramifications of interdependence are extremely complex in nuance and do call for disaggregated analysis in almost each arena.

Nevertheless, I think there are three larger generic arenas of conflict, really economic conflicts over resources or access to resources. Clearly, that's what's at stake in Iran and the Middle East and the U.S. confrontation with the Soviet Union by proxy in that area. Clearly, Taiwan, although it has a residual political stake in maintaining some political legitimacy in Asia, is really interested in protecting its capitalist free trade status over the long term, no matter what happens with mainland China and no matter what happens to the United States. So they have a level of material abundance far superior to what's present on the mainland, and they see that threatened by a gradual assimilation policy. So these are basically economic conflicts.

Now, also there are very, very sharp and acute political and ideological competitions that affect the quality of interdependence. We see it very patently right next door in Central America--the right wing government in El Salvador has neutralized a left-of-center reformist government, and is now trying to wage an all-out war against a left wing revolutionary movement, and harnessing the U.S. strategy and U.S. policy to support it (with significant elements of the U.S. citizenry and organized lobby groups rejecting the official U.S. government policy of military aid and technical assistance and economic aid to a right wing repressive government). So this is primarily political and ideological competition. Clearly, if you ask about global interdependence from the vantage point of a Salvadorian you get a very, very different answer as to whether it's a verbal smokescreen or a new ethic, or whether it's a good thing or a bad thing, or how good or how bad.

And then the third arena of conflict is not quite so specific or identifiable as either the competition over economic resources or political-idealogical models for shaping society or the direction of development. It really is the more pervasive issue of modern technology and modern modes of problem solving impinging upon societies which still depend on traditional values and cultures for their sense of identity, for their integrity, for their sense of respect and meaning and place in the universe. So there is something very shattering about the inroads made by modern technology and modern developmental programs and policies in many countries, everything from artificial insemination or fertilizers. So it's not just an economic vulnerability or dependency that may be established, but the undermining of the cultural base for a whole society, and then that leaves it at sea and almost necessarily makes it a consumer of cultural imports from the United States and is easily moved in directions it would not go.

I recall, in fact this was almost 20 years ago, I think '62 or '63, I was living in northeastern Brazil at the time, and the then president of Senegal, Leopold Sengore, was receiving an honorary doctorate from the University of Bailla in northeastern Brazil. Northeastern Brazil is the portion that has about 65% African population; it's where the sugar economy with the slave plantation system flourished for about 300 years, so you have an enormous African influence there demographically, artistically, culturally, native religions, even ancestor-worship in some places. So it was something quite natural and congenial for the University of Bailla to grant an honorary doctorate to an eminent political leader from West Africa who was also a poet and a man of letters, and a man who had created a new sense of African pride around his cultural notion of "negritude," the African personality as it was called in Nigeria. The theme of his speech in '62 or '63 when he got that honorary degree in Bailla was very, very interesting--he said, 'We Africans do not wish to be mere consumers of civilization.' So what the development model, what modernity, what advanced industrial societies with all of their paraphernalia of movies, television, and communications really stand for is a particular pattern of civilization, and because they have superior technological power, military power, political influence, in fact, their mode of relating to the outside world is tantamount to a division of labor that says, 'We are the the producers,' you know, 'of the ideal or the best model of the good life in the modern society, in the way of harnessing nature through technological mastery, and basically we are asking you to buy into this model and be consumers of civilization.' So Sengore, who was profoundly aware of the cultural dimension of social change and transformation, said, 'Well, look, we repudiate that, because we think we have some wisdoms that of course need to be challenged by the scientific mentality and ideological pluralism and conditions of rapid change, but we think that there are significant central elements of our African wisdoms that can make a contribution to the emerging civilization of universality which is in gestation today, with new patterns of interconnections, at the same time as we are moving toward some kind of global consciousness and even needing to pressure for some kind of global governance institutions and systems. We can only do that--we only want to do that--without sacrificing our specific identity, our roots in our own past and our present, and we don't view ourselves just as consumers of somebody else's civilization." And I think, increasingly, sensitive, enlightened Third World spokespersons are sharing that view. And it's interesting because at the same time there are many equally sensitive and enlightened North Americans or Europeans who are saying there are some significant qualitative dimensions missing in our notion of development.

Clearly, the good life is not simply the abundance of goods. We have Erich Fromm, the late psychologist, who in many of his earlier works, and in one of his last books, 'To be or to have,' said that certain kinds of wanting to have may actually alienate you in as dehumanizing way as the absolute deprivation of essential goods, and this is both an absolute question and a relative question. The ferocious pursuit of goods may not only lead us to have a vested interest in a vertical kind of interdependence with other portions of the world; even now in the United States we have roughly five or six percent of the total population that consume about 35% of the world's resources, and once Lyndon Johnson said when he was president, during the Vietnam War, that the problem is that all the poor nations out there want what we've got and we ain't gonna give it to them. Well, how did we get it? Nobody gave it to us, we just took it. And I think many Americans are quite correctly asking themselves, "Are the patterns of our interrelationships with others systematically exploitative, institutionally internalistic?" Of course we have a stake in making a transition to a new order in a way that will not so totally destabilize the fragile global community, so it doesn't lead to a nuclear catastrophe or totally anarchic disorder. That is the difficult geo-political question about, how do we translate a vision of a more horizontal two-oarsmen-rowing-the-boat, instead of the horse-and-rider conception, and yet make the transition with avoiding nuclear catastrophe or just a proliferation of destructive anarchic terroristic violence or break down of social orders? So you see how really central becomes, then, our views on the nature of interdependence and the strategy of the transition to achieve a qualitatively new model of interdependence.

So you have some of these ironies, the very same transnational corporations that have, in effect, internationalized production and globalized, if you will, certain consumer aspirations, certain styles of work, disseminated certain technologies without of course relinquishing control over them. Also, in the very process, arousing and eliciting acute resistance, reawakening a sense of nationalistic resistance to encroachments. Let me give an example that aborted a few years ago but is very, very revealing of the kind of negotiating dynamics that is under the surface in fairly common kinds of interdependency relationships. This was, I'd say, perhaps five or six years ago. The Mexican government had just finished a whole round of discussions with the Andean pact countries, Venezuela, Columbia, Chile, Peru, Bolivia, and Ecuador, and the Andean pact countries had established a common policy to govern their relationships with corporate investors from the outside. Without entering into a lot of the details, the basic clauses were that they set percentage limits to the amount of profits they could send out of the country. They set certain targets about how these corporations present there would have to train local personnel for top managerial and technical decisions over a certain period of time--three years, five years, seven years--the indigenization of the managerial cadres, if you will--and they were starting to move in another direction of saying, 'Well, look, we would also like to achieve greater technological autonomy over the process of creating technology for industrial purposes, products and services.' And it's interesting, they were basing themselves on studies conducted by the UN group of eminent persons studying transnational corporations a few years earlier that had come up with

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statistics showing that about 96-97% of all industrial, technological R&D (research and development) is conducted in laboratories either located in rich, industrial countries, or located elsewhere but owned and controlled by them. So you can see, the Andean pact countries were very conscious, as were India and Mexico, of the notion that you can forever remain dependent if you always have to buy the product of somebody else's technology. They are constantly creating the technology with their research and development laboratories, and you may buy their technological products or even pay royalties to be able to share in their technological processes and even hire the services of technological managers or experts, but until you develop your own research and development laboratories, you really have not acquired the capacity to create new technology, and technology is, of all the resources, the one that provides the most advantageous competitive edge, in production and selling.

So it was very important for them to reduce their technological dependency, you see, so they had negotiated jointly. They didn't have enough clout to negotiate it alone, but they had pooled their strength, and gotten some quite significant concessions from corporate investors about little by little establishing some R&D technology capabilities within the countries, and training their people eventually and transferring control. So the Mexican government had just been involved in consultations with the Andean pact countries, so this was uppermost in their thinking, and they were giving some thought to perhaps joining the Andean pact. A second thing is that in UN circles or world bank circles, international development arenas, organizations for economic cooperation and development, it was very much in the air to consider the basic human needs strategy. There were then some evaluations of the failure of growth models to improve the situation of the poorest masses in the world, and create jobs, so it was in the air amongst development specialists to say, 'Look, we have to redirect our development planning and development policy either within countries or internationally resource transfers across national borders to target meeting the basic human needs of the poorest masses as a high priority.' A direct objective, rather than think it's going to come about from a trickle-down byproduct or side effect of growth and investment.

So, very conscious of these two normative themes of development, you see, reduced technological dependency and satisfying the basic needs of the mass of the poor, the Mexican government responded in a rather startling way to a routine request frm Nabisco corporation, a U.S. based corporation about 50% of whose operations are outside the country, and I think about one half of these foreign operations are in Third World countries. They already had three plants in different Mexican cities producing the whole range of their products, from cornflakes to Ritz crackers, to candy bars and shredded wheat and all that kind of stuff, and they had made a market study and decided that they could have a profitable operation in a fourth Mexican city. As I say, they had good relationships with Mexico, a good partnership. They applied for a routine industrial license to invest. The Mexican government denied it and said, 'We'll make you a counter-proposal. The counter-proposal is, don't create a factory to produce your regular stuff, but use your food technology to develop a new protein-enriched cracker, which you will then mass-produce at a site we will determine,' I think it was near Oaxaca, which is one of the most food-deficient places, densely populated places, '...you will make this no-frills, no fancy advertising, no fancy packaging, you will sell it at about a 1% profit, just barely above cost, distribute it and market it locally on a mass scale, in order to make a contribution to basic human needs, nutritional needs of very, very poor people without a lot of buying power. In addition to that, you will set up on the site a food technology protein-enrichment small laboratory, and train Mexicans and commit yourself contractually to transfer ownership and control over,' I think it was, 'seven years.' So this was a deliberate effort to start switching from a more vertical kind of interdependence between two institutional partners, to one that was more horizontal and that more directly contributed to some of the developmental needs of the host country.

The interesting thing is that Mexico said, 'Look, we know you're not a philanthropic organization, that you're in business here to make money. We know that you have to make a profit, so what we will therefore do is authorize you to increase your prices for your other products, so that means that it's basically middle and upper classes in Mexico City and Monterey and Guadalajara, the other countries, that buy your fig newtons and your Ritz crackers and everything, so they're going to have to pay 10-15% more, and that's the trade-off for you to devote some of your technological skills and some of your investment and managerial plan in a food deficient place, so that the cumulative bottom-line for your operations in Mexico will be just as profitable and advantageous to you.'

The interesting thing is that the Nabisco hierarchy spent four to six months arguing about whether to say yes or no, and it was pretty much split down the middle, and I think this sort of gets to the heart of the interdependency problem. One group said, 'Look, we ought to do it because the bottom line...the only difference is that we're going to have to wait a year or two to start making profit because there'll be a longer lead time to develop this kind of thing that isn't an existing product. But over the long haul, the profits will be just as great, it will be a fantastic PR bonanza, we will then be able to say, You see, we are in the business of meeting the basic human needs of a poor Third World country, we have established a horizontal partnership, we are not an exploitive multinational corporate scapegoat or monster, etc., etc., etc.' But they lost--these good guys lost. And what went out was, the other group of corporation managers said, 'Look, this is all very true, it would not be any problem in Mexico because Mexicans are, quote, pro-American, reasonable, moderate, pragmatic, all these nice American adjectives, but once the precedent is set for shifting the locus of control about what we produce and for whom and from where inside the corporation to outside, this sets a precedent that we won't be able to channel where it goes. So suppose somebody in Indonesia, or Algeria, starts picking this up, and then the precedent is set for a transfer of power, so I really think that even in arenas of economic interdependence, of cultural interdependence, underneath there is always a fundamental issue of the locus of control, and a transfer of power.'

So that's why there is such antagonism, you see, returning to the larger geo-political arenas, there's such mutual suspicion and distrust beteen the champions of the new international economic order, which is just a code word for new circulation systems, new ground rules governing the exchange of the circulation of power, resources, influence and negotiating strategy and the basic human needs. In all of these issues you have your triangle--your diagnosis, your values, and your policies--so, how do you diagnose what is wrong and why it's wrong, and the values at stake here are equity and parity, and this has to be translated into policy, the way the Mexican government translated its value of greater technological independence or reciprocity of interdependence, and took the particular contract package. So the real issue is the plea, the institutional systematic plea, to rearrange the ground rules governing the international for exchange in ways that will establish greater mutuality and parity of negotiating power amongst governments, amongst states, so that you will not have beggar states, or donor states and recipient states, if you will. That's why there are a lot of pleas to render so-called development aid, financial aid, automatic. The automaticity of resource transfer becomes then a requirement of greater social justice and distribution of resources, particularly essential resources such as food and fuel and basic needs kinds of things.

The basic needs strategists concentrate primarily on justice and equity inside the country, so that it's not just a transfer of resources and power to governments, but some kind of package deal to assure that these resources get down to the needy masses and don't get creamed off by the privileged classes, the bureaucrats, or the politicians in Third World countries. So, you see how difficult it is to break through, because by and large, Third World people view advocacy of basic human needs as a well-meaning, liberal kind of program within the U.S. and Europe to avoid having to transfer power to their governments. And in turn, critically-minded U.S. and European people who say, well there might be some justice in the demands of (NIEO) people to have more mutuality and reciprocity of power at the state level, but ultimately is that any good unless these resources get to the masses of their populations who really need them, and isn't all ripped off by the Stroessners in Paraguay or the Stroessners Marcos' in the Phillipines? So, we have a log-jam here which creates one of the most fundamental issues, which I call the Matthew Arnold syndrome, because in 1855 the poet Matthew Arnold, as he was musing on the waning glories of his beloved Victorian England, saw his country, as he put it, wandering between two worlds, one dead, the other powerless to be born. So that is the problem in terms of devising specific, practical strategies that ultimately alter and change the quality of our interrelationships, from an exploitive, more vertical, horse-and-rider kind of interdependence, to the more mutual, horizontal one, in which we can all acquire a stake in the kind of transition without these destabilizing tragedies and yet without maintaining the paternalistic vertical thing.

GLOBAL INTERDEPENDENCE: EDUCATION'S ROLE
A FORUM WITH DENIS GOULET

Thursday, October 27, 1982   10:00 A.M.

Facilitator: Dr. Ernst Gohlert, Director of the Spokane Consortium for International Studies, Professor of Government, Eastern Washington University

The discussion focused on three related questions:

1. How do we change our educational molds with reference to the needs of global education?
2. What is wrong with existing development strategies?
3. How can we improve the quality of interdependence?

Discussion on each question brought out the following points.

The Need for Change in Education

The educational needs created by global interdependence are far from being met in the United States or elsewhere. The problems exist at different levels.

Generally, U.S. education is poorly equipped to impart to students the knowledge and understanding required in an increasingly interdependent global environment.

At another level, but equally important, the large number of international students who live and study in the United States, are, as a rule, accepted into the educational system with little regard to their particular academic needs, i.e., the kind of preparation they need upon returning to their countries. Few universities consciously examine their curricula with the needs of international students in mind.

Aside from curicula and related concerns, there is the additional problem of how to reduce the brain-drain for developing societies, specifically how to assure that international students will permanently return to their home countries. Methods used by Third World nations to husband their human resources include contractual, legal and financial arrangements. More recently, some African countries have begun to train personnel as "global strategists" (e.g., the Pan-African Institute) and, as experts on internal African development models and appropriate technology.

In short, the educational needs of developing countries are no longer entirely at the mercy of the industrialized powers. However, there are also several institutes in Europe (Sussex, Geneva and the Hague), which train their students explicitly with an eye to development needs.

The conclusion reached was this: We need to open up the entire education system, in order to make it less vertical in nature and to permit it to induce change in our own systems as well as in those of others.

Development Strategies

Existing strategies of development suffer from ethnocentrism and fundamentally flawed assumptions. The various western-sponsored development models failed not because they are static in the implementation stages; rather, they do not succeed because they derive from intrinsically flawed premises.

This raises fundamental questions about the nature of society and the good life. Daniel Bell speaks of the "disjunction of realms"--economic, political and cultural--each governed by its own ground rules, leading in opposite directions. The result is a dissolution not only of the substance but also of the procedural consensus within society. We are simply muddling through. We are between two worlds, one dead and the other powerless to be born.

New development strategies--more flexible and more diverse approaches--have to be found.

Quality of Interdependence

While interdependence is a fact, the precise nature of the relationship is subject to question and change.

As it stands, interdependence is highly unequal and injust. It is, by way of analogy, more in the nature of rider and horse, than a team rowing a boat.

To improve the quality of interdependence, education has a pivotal role to perform, which entails a growing understanding of the value of cultural pluralism, empathy and a reappraisal of modernity.

The extent to which education is successful in meeting the needs of global interdependence and development is important; therefore, the stakes are extremely high for the developed societies. Ironically, it is precisely countries like the United States, which block the necessary changes, by their unwillingness to change themselves.

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PRIOR LEARNING EXPERIENCE (PLE) PROGRAMS: QUALITY ISSUES AND ANSWERs

Thursday, October 28, 1982 10:00 A.M.

Presenters: Joan S. Malling, Director, Prior Learning Experience Program; Director, Management Information System

Jeff R. Sweeney, Instructor, Prior Learning Experience Program, Marylhurst College for Lifelong Learning, Marylhurst, Oregon

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OBJECTIVES:

1. To define quality assurance in context of credit for prior learning programs.
2. To describe general distinctions among programs at 2-year, 4-year, state and/or private institutions.
3. To involve participants in raising academic and administrative issues relating to three phases of prior learning experience programs: PLE admissions activities including assessment, portfolio development workshop, evaluation of portfolios.
4. To discuss as a group various approaches towards resolution of issues in context of quality assurance.
5. To present ideas for future approaches to quality assurance in PLE programs.

CONTENT:

The workshop began with a presentation on quality assurance. The point was made that the standards used in determining quality in PLE Programs should not differ significantly from criteria used for any learning situation. These criteria were stated to be: a) that learning be at college level, b) that programs be congruent with the mission of the institution and with other degree related programs within the institution, and c) that standards for evaluation of credit be sound and consistent with institutional standards.

A general description of credit for prior learning programs and definition of three possible phases of PLE programs followed. Participants were then asked to raise issues of concern. The issues that were raised were discussed within the context of the previous definition of quality assurance. Issues revolving around the admission phase were:

- Who should/should not be in PLE?
- How is pre-assessment process handled?
- How are students attracted to PLE?
- Who in the institution is involved in the pre-assessment process?

Discussion of portfolio development workshops involved questions such as:

- How and what kind of assistance is provided students?
- What learning is suitable for college credit at a specific institution?
- How does a student substantiate his/her learning?
- What level of performance is demanded in both the expression of learning and the learning itself?
- What is the value of structured procedures, e.g., models, deadlines, etc.?

The evaluation phase dealt with:

- Who is involved?
- What standards are applied and how are standards controlled?
- How is a student's credit integrated into his/her degree program?
- Who awards the credit?
- What are the implications of transcripting procedures?

The participants represented a variety of institutions and as a result issues were discussed from several perspectives. Materials used in the PLE Program at Marylhurst College were distributed for use in the discussion.

The workshop closed with a presentation on future directions. Raising and clarifying standards, and cost effectiveness were described as areas in which various groups or institutions were involved. The Management Information System program at Marylhurst College and its relationship to future directions in non-traditional environments was briefly described.

THE WORK ETHIC: YESTERDAY AND TODAY

Thursday, October 27, 1982 10:00 A.M.

Presenter: Dennis Peters, Instructor in Humanities, Shoreline Community College

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OBJECTIVES:

1. To examine the strength of the Work Ethic in American Life.
2. To suggest benefits to educators, students and employers from a detailed study of the Work Ethic.
3. To examine the sources of the Work Ethic.
4. To examine the role of the Work Ethic in shaping the self esteem of American workers.
5. To study historical and contemporary value systems which view work differently from America.
6. To propose institutional and personal benefits from a reflection on the changing nature of Work in America and ways in which the American Work Ethic must adapt to that change.

CONTENT:

Professor Peters began with a suggestion borrowed from Barry Commoner's dictum about the environment, "Everything goes somewhere." In the realm of ideas, no idea ever truly disappears though it often undergoes transformations which effectively disguise it, but never change it completely. Such would seem to be the progress of that collection of attitudes in the American consciousness known as the Work Ethic.

Professor Peters examined with the audience the striking ways in which Americans regard work not simply as a necessity, a means of supporting oneself but rather an infallible measure of personal worth and morality. Almost uniquely, Americans believe that people who work are better than people who do not work. Those who work hard are better than those who simply put in time. The longer and harder one works the more valuable one becomes. To Americans these attitudes are not an "ethic." They are the proper and natural response to the activity required of a responsible adult.

The inflexibility with which Americans judge themselves and others by this stern code is not surprising in the light of its history. Professor Peters reviewed the thesis of Max Weber about the rise of capitalism from the Calvinist theory of predestination and the signs by which one might plausibly speculate that one had been justified. The vigorous work and financial success of the virtuous middle class merchants was such a sign.

This value system came to America with the Puritan colonists where it energized the building of a young country. The intense concentration on work revealed leisure as frivolous and dangerous. This belief was the natural ally of the ancient platonic misgivings about the efficacy of poetry and imaginative literature, neither of which satisfied the American thirst for practicality and results.

The objection frequently rises that with the death of Puritan theology, surely their work ethic would perish as well. But it is a truism in social science that a value can be transvalued. A religious conviction can be transformed into a secular practice and go on powerfully compelling new generations to action, oblivious of the source of their compulsion. From the Puritans, America has inherited a passion for vigorous, unremitting toil, and scorn for those who do not share this belief.

Americans absorb these values early. Measurements have found that kindergarten children have already absorbed the work ethic. Not only that, but they have very strong convictions about gender roles appropriate to various kinds of work. They believe that there is men's work and women's work. Like most Americans they have little use for "lazy" people and they prize *doing* more highly than thinking. But educators and employers need to know how deeply they themselves reinforce and perpetuate the work ethic.

Our school systems have as the stated and almost exclusive goal the training of youngsters who will be skilled and energetic workers. Employers too often restrict their interest in workers to the results which they produce and not the toll taken on them by the conditions under which they toil. Worker themselves fail to understand how their own mental health is threatened by the fact that they have internalized a centuries-old value system, one perhaps badly in need of rethinking. One thinks, for example, of millions of currently unemployed who subconsciously blame themselves for being out of work. In the United States to a large extent we are what we do, and so, as John Coleman has observed, it follows that to *do* nothing is to *be* nothing. The dislike that many have felt for the unemployed has now turned inward in what one can describe as an epidemic of self-contempt.

College eduators need to know that their students almost universally think of themselves first and most emphatically as workers or potential workers. They have learned that it is from work that they derive not only their value as persons but their very identity. The women's movement is a powerful reminder that women have recognized that only by becoming workers will they ever really establish themselves as worthy of respect in their own eyes and in the eyes of their society. Consequently, male and female students sit in our classes with strong though often unspoken expectations. They want to see how each class will prepare them for a job. Educators must see this as a quest for identity as well as a paycheck. This student demand has strained the traditional core curriculum and forced it to justify itself. The academic community has often responded to this pressure by lashing out at what they describe as rampant vocationalism. Taxpayer groups and state legislatures have added to the pressure on colleges to expand vocational offerings and to diminish the broadly based humanistic education which traditionally has been the essence of a higher education.

Professor Peters argued that the study of the history of the American Work Ethic might shed light on this controversy and might point a way toward accommodation. This will require that all students, vocational and academic, spend some time discovering how wedded they are to the work ethic. They will begin to see that their family values, the impact of popular entertainment, media coverage and most especially the schools all combine to equip Americans with an almost mystical belief in the power and efficacy of work. It is a belief that other cultures find both comic and exasperating. By expanding the study of the American Work Ethic to include a study of other cultures' attitudes to work, Americans can learn rationally to appreciate the benefits of our system and perhaps to extricate themselves from an addiction which often severely limits our understanding of what it means to be human.

QUALITY CIRCLES AND PRODUCTIVITY

Thursday, October 28, 1982 10:00 A.M.

Presenter: Casey Fast, Director, Productivity Center
Lane Community College

OBJECTIVES:

1. To discuss the history of the QC movement in business and industry.
2. To examine the LCC QC program.
3. To provide "hands-on" experience in some of the QC techniques.
4. To suggest the pros and cons of establishing a QC program in an educational institution.

CONTENT:

Shortly after World War II, the Japanese began to study successful business/industry models in other countries, hoping to rebuild Japan as the "Switzerland of the East." The combination of their strong cultural emphasis on teamwork and statistical quality control led to formation of their Quality Control Circles. These are now attributed to be the main force behind Japan's leadership in productivity improvement.

QC techniques were first introduced into the U.S. at Lockheed's Sunnyvale plant in 1974, and Lane Community College began its circle program in September 1981. LCC currently has a steering committee, eleven circles or teams, and a management training program. These have focused on a variety of topics. The Welding Faculty Circle improved processes in its tool and supply room. The Nursing Faculty Circle studied its heavy schedule of meetings on Monday and consolidated or eliminated many, resulting in freeing considerable time. Many other examples of LCC QC activities exist.

QC's are small groups of employees from a common work area which use formal techniques to solve ongoing problems of their work situation for management and themselves. The techniques include Structured Brainstorming, Pareto Analysis, Cause-Effect Diagrams, Process Flow Diagrams, Situation-Target-Proposal Involvement, Data Collection, and Management Presentations. Participants actually did a Cause-Effect Diagram on the problem: Administrators sometimes resist QC programs.

The pros and cons of QC's are numerous. They move some of the decision making from managers to staff. Consequently, staff are much more agreeable to implementation of decisions, but managers lose some control. QC's tend to move very slowly and participants must be comfortable with ambiguity. QC's do not solve large institutional problems. QC's focus on "people building" and do improve productivity if given time.

References:

1. Quality Circle Output, Facts for LCC Quality Circle Members
2. "If it Worked in WWII," reprint from Eugene Register-Guard
3. Ideas for a Better Way, Quality Circles & Verteams
4. "Quality Circle" reprint from San Francisco Sunday Examiner & Chronicle
5. "The Verteam" reprint from Training and Development Journal
6. "Quality Circles: Making Schools Productive" reprint from Voc Ed 57:4

Any conference will prove successful if it provides one or more of the following:

- introduction of new ideas;
- opportunities to develop new skills;
- opportunities to create solutions to existing issues;
- reorganization of concepts into new juxtapositions; and among many others
- new people contacts.

This one has succeeded on several counts, but for me most notably in the areas of new ideas, new relationships and new contacts. Two major speakers were outstanding: Goulet for his visions, curiosity, brightness and desire to teach; and Lintner for his basic, sound examples of what education and industry can do when barrier begin to come down.

Jim Beaird
President
Western Oregon State College
Monmouth, Oregon

DONALD LEU
DEAN, SCHOOL OF EDUCATION
PORTLAND STATE UNIVERSITY

Thursday, October 28, 1982 1:00 P.M.

Introduced by: Dr. Patricia Justice, Dean of Instruction, Fort Steilacoom Community College

OUR CHANGING WORLD--NEW CURRICULUMS AND NEW DELIVERY SYSTEMS

Had a hernia operation a few days ago, and the directions were, 'Don't climb stairs,' so I came here and went up the stairs, and then they plied me with coffee, and 'Where's the men's room?', now I come up here and climbed stairs...I'm liable to be letting it all hang out, without trying to. Thanks, Pat, I'll get even with you later.

What we're dealing with is Creative Responses to Changing Realities, and what I'm dealing with is a timeline of 35 minutes, so I'm going to deal with that a little creatively.

What I'd like to do is, instead of a so-called speech, see if we could move off of the left brain and move towards the right brain. As you know, some of us, particularly the males, are limited in our right brain capacities; we're more left-brained, we tend to memorize and plow ahead in a straight line. The women tend to be more creative and reliant upon assimilation of the right brain, and what I'd like to ask you men, if you can, is to attempt to get into the right brain mode and attempt to think creatively with me as I have a think-along with you. It's not a speech, and by the way, knowing this group, I'm not seeking consensus, nor do I intend to get it; this is not the gospel according to St. Luke, it's an attempt to better understand or to partially understand or to be able to predict more accurately what is going to be happening to us in our educational profession and in our personal lives in the immediate years ahead. In the old days when I made long range studies, we used to say long range plans were for 20-30 years; now a long range plan is 3-5 years, perhaps. This is, then, a dialogue...I've started out with seven ideas that I thought were changing our educational world, and that's a one-hour presentation, so we're now down to four or five.

These ideas not only are changing our world, but changing your life, my life, our lives. The first reality of creative change is the changing world itself. I want to spend just a few brief minutes on some of the major inputs that I think are directly impacting you and I in education. Secondly, I want to turn to the effective schools research, not to revisit the effective schools research, but to attempt to go beyond it in what it says. We all now know what effective schools are, but we really don't know how they're achieved, and I want to do a little bit on the how. The third idea that I'd like to think with you is what I call the political curriculum--the emerging political curriculum--because I see the curriculum emerging today as not a rational curriculum, not based upon research or development or knowledge, but basically a political curriculum, and I'm not concerned about it, but if I view it in that way I can understand and predict and behave appropriately. Then I want to deal a little bit with some new forms of schooling and education, which is my fourth idea, and if time permits, we'll deal with the fifth idea, that, if all of those changes are taking place, many of us are finding it physically and psychologically impossible to survive, succeed, within all of these changes and all these constraints and all this trauma, so I want to deal a little bit with survival skills, and that's my fifth idea. So that's what I'm going to attempt to do in this presentation, and by the way, if you want to climb those stairs, you now know there are five parts, and each will be about ten minutes, and you can cut out of Part One, or Part Two, or Part Three. I've had audiences leave during different parts and there's no problem with that.

I'm now starting Part One, and Part One has the idea of a rapidly changing world, the changing reality of a rapidly changing world. We all are aware that we're having around this world an increasing number of wars and revolutions and starving and crime and violence and tremendous value differences and a lot of technological change, a rise in expectations and limited natural resources, and incidentally, when you study the critical natural resources you find that ones most critical to the United States in our development are located in Russia and in South Africa, which has implications for where we're going. We know about the uncertainty of the President, of the speed of the change. Back in the good old days it took 50 years for a significant change to be diffused through 75% of the curriculum in the public schools. Now, one legislative action can change it in 15 minutes, and does. So the speed has changed.

I see twelve major revolutions happening in these United States, and I'd like to point out to you that in my judgment, we're the oldest modern nation in the world. We're the first nation that went through modernization, we're the first nation who began in technology, so we are now the oldest modern nation in the world, and we're undergoing twelve revolutions simultaneously. In the old days we used to get one occasionally. Of the revolutions that have implications for you and I, as I see them, the first is what I call the post-industrial technological revolution, which we're going to deal with in greater degree, and you have, in your other programs. For example, in our family, we speak seventeen languages. I can stumble along in Chinese and Spanish, and one son speaks Russian and Marshalese and a little German, and the kids speak twelve computer languages. And their parents don't understand, and the parents now are trying to learn from the children, which is a reversal of the teaching/learning mode. You in the public sector are finding kids coming into your public schools who are far more sophisticated in computers and technology and computer information than the teachers are, and the teachers are far more sophisticated than the Portland State School of Education which is supposed to be training the teachers, and so we have this reversal of knowledge. So we have this post-industrial technological revolution.

The second one is the economic revolution which we're just beginning to understand. We now know that the Reagan economic theory isn't working--that's a divine revelation. We're now beginning to get some sophisticated knowledge that neither did the Keynesian theory of economics work. But, for example, let me give you some of the new knowledge that's come out from the research and development and economic revolution. For every one billion dollars in military expenditures, as compared to putting a billion dollars into human service developmental type of activities, there's a loss of 18,000 jobs. The $154 billion defense budget equates to 1,500,000 less jobs if we could safely (and I'm not suggesting we do) spend that in development activities. And we're moving towards a trillion dollar military budget, and what are its economic implications? And what is my point? That the economic revolution, that the economic facts, have to be totally reconsidered. We're moving towards a democratic revolution where everybody insists on being involved intimately in every decision, without the willingness to commit themselves to study the problem. And that has all kinds of implications for our educational system. We're moving to an urban/rural revolution. I was speaking in Portland yesterday or the day before. Our daughter, who is a hill-person living up on the mountain, comes down out of the hills to see her dad occasionally. The others are in urban centers, and they move back and forth, all over the United States and world. We're moving into a cross-ethnic revolution, as you well know; by the year 2000, and I think by 1990, the latest data show that in the state of California, the minority will be the majority, and with all this uncertainty and change, every time we have uncertainty and change, we have a greater influx and a greater flow of populations of ethnic groups. I think it happens to be a rebirth--I think it's a bloodstream coming into our system, but with traumatic results. We're having an educational revolution which we'll deal with later; we're having a materialistic revolution. I was raised that you went to school, you graduated, you got married, you moved to the suburbs, you worked till you were 65 or 70, retired, you died, and you got your reward in heaven, and that you should wait until then to really get your reward.

Somehow this generation is not exactly buying that. We're into the materialistic, credit card, 'I want it now,' no delayed rewards, and we are saying to them, 'You study hard, study long, and behave yourself, and get through school, and you'll get your reward at some later date.' But tht worldwide change has all kinds of implications in our educational system. We have a youth revolution. I've had the fun of working all over the world on educational planning and development. When I was in Nicaragua, just before the revolution, and I was out working in the rural areas, the revolutionaries were 13, 14, and 15 years of age. In Thailand the same way, so that the revolutionary movement is a movement of the youth. That's not bad enough; our tenth revolution, which I call the senior citizen revolution, where the dominant political force in the immediate years ahead, if not today, both in terms of numbers and in terms of voting records, is our senior citizens. And yet our educational programs are largely geared as if there was not a senior citizen population.

If that's not enough, our eleventh revolution, what I call the sexist revolution, is where the women have not only discovered that they're equal, but they've also discovered that in many ways they are superior, and I find this extremely threatening. I not only have to deal with it at work. In the old days I used to send out directives to the faculty. The faculty were primarily women. And you know, they followed those directives. They read them and followed them. When I was Deputy State Superintendent in Michigan I used to send out memorandums to the staff, and they followed them, generally speaking. Now at Portland State, I send out 'suggestions for your possible consideration.' And I'll be lucky if I get 10% reading it. We are having a sexist revolution, and it has deep and I think exciting possibilities and probabilities and causes in the educational scene. I do superintendent searches around the United States, for example, and we still are not at the stage yet where we have adequately skilled and trained women as superintendents. But if you go in our classrooms at Portland State, or Washington State, or Oregon State, or wherever, over 55% of our graduate students in educational leadership are women.

We're also having our twelfth revolution, which is what I call the religious revolution. There are over 44 million Americans who are either born-again Christians, or who are finding the way to sustain themselves under all of these revolutions and this trauma and this change, is a basically religious belief or heritage or religious background, and so we're having twelve revolutions all at the same time, all having direct and immediate implications for our public schools. I have now finished Part One, The Trauma of Change.

I am now starting Part Two, which is what I call, 'Beyond Effective Schools.' Could I have that first slide up there? Now what I've done here is oversimplified, and one of your colleagues at Northwest Lab and I have had the fun over the last three or four months of working with the school board associations and school administrators on trying to simplify effective schools research. As you well know, the Northwest Lab has gone further than any other organization in the United States in implementing this research in their Alaskan and other projects. But I want to take a look at effective schools research--in terms of some psychological, philosophical issues that go beyond the chart. You can see, for example, that if you boil it all down, they're saying that, hey, one of the most exciting concepts is that there are some schools that are much better than other schools when there is no difference in expenditures, and how do we explain those schools that are superior and yet do not have superior resources?

Many of them are located in the inner city, are all black, all low income, but many of them are located in suburbs and high income. And how do we explain that? I had fun at Michigan State going around the United States trying to look for these effective schools some years ago, so what the research boiled down to, in general and oversimplified, is that the school had an unusual amount of community support, it had an order and discipline about it, it had a pervasive caring attitude, it had high expectations for the students, it had clear academic goals, it had

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rewards and incentives, and it had teacher effectiveness or efficacy, whichever term you want to use, and that was commonly present in almost all of the effective schools. When you turned over on the instruction side, you found out that those effective schools paired with ineffective schools or less effective schools had frequent and monitored homework, they had frequent monitoring of student progress, they had opportunities for student responsibility, they had high academic learning time, their time was on tasks which were critically important. There wasn't a single teaching strategy; they had a variety of teaching strategies, they had a tightly planned and coupled curriculum, and they had the teacher ownership. So we found those things, those rather obvious things. But I want to move beyond that. They also found, over in the left hand corner, the principal (I call that the learning administrator) was the key to effective schools; the manager, the educational leader was the key. But let's go beyond that. They also found that the parent had a belief in, a support of and participation in the school, in the top part of the triangle, and they found that the teacher, the learning instructor, had a lot of ownership and pride and so on.

Now let's go beyond that. What else are they finding? Well, first, they found that the central office plays a quite different role. I'm working for example in Fort Worth, Texas now, a variation of Lansing, Michigan, where there were a lot of learning gains, an exhorbitant amount of learning gains, and when I was working in Chicago Public Schools and Lansing, how could they bring about such extensive learning gains? Well, they found that one of the keys was the central office staff, oversimplified, changing their whole role perception. They became a support base rather than a control base. The boards had clear goals and objectives and timelines, but you did not have that huge bureaucracy. I was thinking, when I was working in Chicago, to get a change in Chicago you've got to move all the way through the bureaucracy, and by the time you got down to the teacher in the trenches nothing was made available or made a significant difference to her or him. So the central office support base was changed both in attitude and belief and in activities. More important than that, you found a relationship between the learning administrator, the principal, the leader, and the teacher that was warm, cordial, trusting, mutually supportive and mutually believing in each other. So I take that composition with Bob Bill's research and some of the other things that we were doing on effective schools, and I put that into what I call the 'plus relationship.' Let me try to explain what I mean by this, oversimplified and forgive me for oversimplifying because of time. Those schools we went to, the effective schools, were so self-evident; the principal had a strong self-concept, strong belief in himself or herself as an outstanding educational leader. But that principal also had a strong belief in the teaching staff, their quality, their ability, their potentiality. High self-concept, high concept towards the worth, the dignity, the abilities of others. And we found that in every case.

Now the opposite of that would be people, like myself, who some would say were 'plus' towards themselves and 'minus' towards others. I have met superintendents who have been in seven districts in twelve years and they have never had a good board of education, have never had a good community, have never had a good management team, have never had a good teaching staff, and they've inherited these messes. Plus, minus. We have never found an effective school in a plus-minus situation. Then we went into the cult of democracy, what should we do today, children? Minus, plus. I don't know, but somebody else does. And I'm suggesting to you that in our movement towards effective schools that the plus relationship is extremely important, extremely critical. Now there are obviously other factors...but, now we went down the trait analysis; we started studying traits of effective educational leaders and so on and so forth, and millions of dollars were spent in research and development on trait analysis and it led nowhere, because I had concluded, for example, that the outstanding school principal was (1) white, (2) male, (3) a former coach, protestant, Swiss (I happen to be Swiss), and, by the way, if we look around, most of the successful principals were, because there weren't any others. Unfortunately, all of that research went out the window when I found the best principal among the most effective schools in America. She ruined the whole research--was fat, black, and Catholic. I've never forgiven that woman. I ruined millions of dollars of effective schools research. My point is, you can know all the traits in the world, and it won't make a tiddledy-damn, but you can go at some of these factors, some of the psychological/philosophical factors, and you can explain and predict effective schools. End of Part Two.

I am now starting Part Three, or idea three, which is the Political Curriculum. I know this is going to be a major task--can you go from one to two? That's a plus/minus statement. Sure you can go from one to two. I want to have a little fun with this--they've got me glued here, because apparently they're taping this, so I'd like to go down and move around, but let me point things out on the screen and I want you to think with me. I've tried to conceptualize the political curriculum in this visual. The insides are the relatively simple things, and it becomes more difficult, and I think more important as you move to the outer parts of the triangles. We are big in the basic skills, in the existing basic skills curriculum. By the way, there's no argument about the importance of learning to read and write, and learning arithmetic, which is quite a bit different than learning mathematics; I have no argument about it. It is a basic necessity for survival in today's society and in our schools. But many of the basic skills people are forgetting the purpose of basic skills. The purpose of basic skills as you move out on that triangle is communication, and communication means listening, hearing, understanding, empathizing, and we're forgetting about the basic purpose of the basic skills, and we're forgetting about the total curriculum.

Now, if I wanted to prove to our board of education, and we've done this, that we're making tremendous progress in our schools, all I need to do is to move the reading program and the arithmetic program to the morning. Give them a good, solid dose of about an hour and a half of each in the morning, when the little buggers are fresh, and put my inservice money into the basic skills, and whoa, we go right off the chart in academic gain, and we can point with great pride to what we're doing. And I would suggest to you there's a little bit of hypocrisy in that. And that's why I'm saying that's the political curriculum, becase we do get support if we focus on it. I'm suggesting to you, in this world of rapid and traumatic change, that somehow that is not enough. Let me go down to the social studies. For example, while we've focused on the basic skills, social studies have been pretty much on the back burner--the behavioral sciences, civics, which has to do with law, order, including justice and behavior--all of those should be leading toward the goal of self-understanding, self-worth, self-discipline, self-actualization and the highest level of self-educating. We're not able to measure those too well on our existing test scores, and we're rather losing, or ignoring, that purpose in that part of the political curriculum.

Let me move over to the top part of the triangle, and by the way, all of these are obviously oversimplified and interrelated. Health and PE used to be thrown in with basketball and so on; now largely because of women in this movement, health and physical education has become a much broader program, and they're even using computers for immediate diagnostic feedback and so on. But that leads to really, the quality of life skills that are being largely ignored in public schools as we're focusing on the basic skills. Art and music is of tremendous importance to any nation, to any individual, or to any soul, and actually, the purpose of all these quality of life skills deals with holistic wellness; that if we have a nation whose people are well-educated in the basic skills and who are not mentally ill, or are mentally ill, or physically ill, or have no spiritual base, do we have an educated society? I would suggest to you that the political curriculum is ignoring the holistic wellness concept in education.

Moving to the right hand side of the chart...right now, all of us are in technology, technology in education, which is a better term than instructional technology, but I would suggest to you that technology, as critically important as it is, and it is important, is a sub-system of science. In one of the districts I've been working with, we can achieve our definition of computer literacy in one course in the middle school. So if the goal is computer literacy, we can put another course, another band-aid in, and we can achieve computer literacy in one course in the middle schools, and every kid who comes through that district will have computer literacy.

I'm suggesting to you that in this world of rapid change, that isn't enough. We've got to go back and take another hard look at our science and math curriculum, and that is much more complex. And that science and math, at the best levels, really leads to logic, and that logic leads to philosophy and ethics. So what I'm suggesting to you, looking at this visual portrayal, and forgive me for its simplicity, is that as educational leaders, we can use the political curriculum in a strategic planning mode, but we need an educational program that helps the total public. We are educators, and understand what the real purposes and goals of public education should be, could be, and what an educated person is, or should be, and it's something more than basic education or basic skills. That's the end of Pat Three, the Political Curriculum.

I'm now starting Part Four, New Forms of Schooling in Education. You and I are in the business of schooling, we're not in the business of education. Schooling is a subsystem of education, and education is all of the learning, attitudes, beliefs, and understandings that a person acquires during their lifetime. Education is growing at a tremendous rate. Schooling is declining. Community colleges grabbed upon the concept of education early on, in the early 1930's, and the blossoming of the community college movement was their understanding of education and schooling. They extended the curriculum to all of the populations; they started at the level they were; they introduced and are introducing technology and so on. For example, TV is a larger part of education, computers. Our kids now, and your kids, when they come to see us, are so much better educated and can educate themselves better than we can teach them in our classrooms. Paperbacks, the military educational program, is the fifth largest educational system in the United States, and will soon become the largest educational system in the United States. And yet we proceed as if there was not a military education program. Program learning, adult education, home learning, technology...what it is resulting in, which always comes back in my book to a philosophical issue, is that there's going to be a widening gap between the rich nations and the poor nations. When I was working, for example, in Greece on the modernization of education, after five years of intensive work and money, the gap between the United States and Greece had widened, not closed or narrowed. But because of this technology, we're getting into rich nations and poor nations and the widening of the gap. We're getting into rich states and poor states and the widening of the gap. The real issue in Oregon, is Oregon going to survive as a technological state? As you compare it to its investment cycle. And more important, we're getting into rich families and poor families. The rich families are information-rich families who have access to their home computers, their home technology, and access to the entire network of information.

And so we're going to find, coming to your schools, a widening span between knowledge, information, judgment, study habits and attitudes and beliefs. And yet, in this nation of ours, I go all the way back to Harold Clark's research of many years ago: if you wanted to predict the rich nations and the poor nations, you don't look at their natural resources. Denmark, for example, doesn't have many natural resources, and Argentina has great natural resources. You don't look at their political form of government as a predictor because you can have fascist dictatorships, and wealthy nations; you can have democracies, very poor...and you do. You look at their investment in education, their human investment, and look what's happening in this state and this nation, in these recent years. Now that seems to say to me that, if we're really educators, we must educate the general public on education as an investment. This is particularly true in the immediate years ahead, when we're going to have rich nations and poor nations in technology, science, logic, ethics and philosophy.

We already are at the point, for example, by combining biology, chemistry, computers and so on, we can affect plant life, make them grow taller and faster and quicker, stronger; then we got into animals, breeding and genes and biochemistry and computers and so on. We can change the composition and the shape and the growing habits of animals, and we are now at the stage with that in chemistry, we can change intelligence, or we can have tall people, short people, we can change anything we want in terms of our science and technology. But have we really thought through what's happening in Japan?

Now my brother's boy, for example, went through Japanese high school, the American Japanese high school, stayed and went through an American and a Japanese university, and we saw him up at Crater Lake last summer describing and discussing the differences in their educational program. Japan has made, and is making, a major investment in science and technology as a way of making themselves information rich and economically rich and we see it happening. And we appear to be backing away from this kind of an investment, or making a selective investment. I think it is frightening for our nation, but I'm optimistic that once the power of knowledge, which is our responsibility, is shared, that this will be reversed. That's the end of Part Four.

I now have to stop and see what our time is. I have three minutes. I was going to do Part Five...I'll show you what you're going to miss. It's just going to be terrible. Part Five had to do with how you and I survive with all these worlds of change and I'll just run through it rather quickly. If all of those changes that I've described on the left are true, what does it say for you and I then, as persons, and as survivors? And I would suggest to you that you may begin to look at the simplest parts of the Stress Box diagram, which have to do with exercise, or your space. I don't know about you, but my office has carpeting now, it has paintings, it has music, it has plants, it is an informal situation. My colleagues and I spend time on how can we be nicer to each other, how can we work as a team, how can we work as a psychological team. The same with your circle of friends. I used to notice a number of you in trying to survive all these changes would have a circle of friends that I would never bet on. You've deliberately selected a circle of friends that are filled with problems. I think that's great for Florence Nightingale, but as an educational leader who is putting in a 60-70 hour week, I can only take on so many of these kinds of problems. I have a carefully selected circle of friends who are the kinds of friends that are relaxing, exciting and joyful for me. I could get off on the psychological, philosophical and spiritual self, but I just really will brush over this line and say to you, if we have all this technological knowledge in the world, and we have all of the skills, and if we are information rich, but we still haven't understood ourselves and dealt with our psychological, philosophical selves, and our psychological and philosophic environment, those skills will be of little value. End of presentation. Thank you for thinking with me.

OUR CHANGING WORLD: NEW CURRICULUMS AND DELIVERY SYSTEMS
A FORUM WITH DONALD J. LEU

Thursday, October 27, 1982 2:00 P.M.

Facilitators: Dr. Patricia Justice, Dean of Instruction, Fort Steilacoom Community College
Dale Green, Associate Dean of Instruction, Fort Steilacoom Community College

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As a summary and extension of Donald Leu's luncheon speech, this forum provided an opportunity for participants to discuss both the content of Dr. Leu's presentation and the implications those ideas held for curriculum and instructional delivery systems.

Two key points of Dr. Leu's speech were the focal points for discussion: the emerging political curriculum and the new forms of schooling.

Emerging Political Curriculum. Dr. Leu indicated that basic skills were easy to sell for political reasons, but that the public must understand what an educated person should be and that an educated person needs to learn more than basic skills. Dr. Justice concurred that a holistic approach to education was important but indicated that the basic skills must be rebuilt before the broader perspective could gain in a political curriculum. She cited research which indicated that individuals leaving the K-12 system were not prepared for college level work. Comparative data from other educational systems such as the U.S.S.R., Japan and China were presented to show the extreme differential in science and mathematics requirements as well as composition skills. Dr. Justice indicated that a change in focus for our educational system is needed. Not only do we need to re-emphasize the three R's, we need to augment them with the three C's--computing, calculating and communicating through technology.

To accomplish this change in emphasis four major items must be addressed:

1. Education must once again become a respectable profession for individuals to enter. Quality salaries must be available for quality individuals to choose a career in teaching rather than a more lucrative career in business and industry. If the lack of science and mathematics instructors is to disappear, salaries in education must become competitive with those offered in the private sector.

2. Teacher training programs must prepare individuals who are willing and able to improve classroom instruction in the 3R's and the 3C's. Colleges should aim to produce teachers trained in their craft, equipped with the intellectual skills necessary to move beyond mere survival and able to alter what occurs in the classroom.

3. Inservice staff development should focus more sharply on two areas:

   (1) Improving teacher knowledge and skills in the craft of teaching for a technological age, i.e., more than merely lectures/discussions/and projects.

   (2) Helping teachers to pursue unfamiliar and even "risky" classroom techniques. If the techniques help students lern, they should be utilized. We must not only talk about curriculum reform, we must also be willing to do it!

4. The emphasis upon basic skills, the 3R's and 3C's, must become real. To do so means being an educational agent of social change. It requires less comprehensiveness, e.g., "something for everyone," and more standardization. This also requires mandatory homework, strong academic requirements and fewer general interest electives.

Such reforms are necessary if the basic skills are to reach a sufficient level to handle the technological challenges present today. Without a strong commitment to the basic skills, the holistic curriculum mentioned by Dr. Leu will not become a reality.

New Forms of Schooling. Dr. Leu indicated that tomorrow's education rich families will be those with access to information. That information access will occur primarily in the form of the computer revolution. Mr. Green confirmed that statement and indicated that no longer will the teacher/student ratio be the prime concern in education. That ratio will be replaced by the student/computer ratio. The effects of high technology upon all of society are real and growing. The computer chip has revolutionized industry and has begun to revolutionize education. Without a firm grounding in the 3R's, students and their teachers will be unable to quickly adapt to the expanded needs of the 3C's.

The impact of technology not only has implications for instructional delivery systems but also for the instructors providing that information. Our instructors must become computer literates immediately. Literacy implies both the ability to utilize computers as a teaching tool and to prepare basic programs for their instructional areas. The software available for computer assisted instruction comes pre-packaged, but does not meet all of the classroom needs of instructors. The advancement to economical software will come when more instructors are able to write programs specific to their own particular approach to teaching.

The future implications of both technology and the need for students and their instructors to be prepared for those advancements through thoroughly grounded basic skills and the ability to adapt to technological change were discussed at great length by the presenters and the audience. Consensus was that the advancements are moving at an extremely rapid pace ad that educators and education must move just as rapidly to both catch up with and keep ahead of these developments. Both the emerging political curriculum ad the new forms of schooling will be grounded in solid mathematic, scientific and communicative skills. Those skills will allow all of us, students and teachers alike, to adapt more readily to the technological changes yet to come.

TEACHING ADULTS IN THE WORKPLACE:
DESIGNING PROGRAMS THAT MANAGEMENT CAN SUPPORT

Thursday, October 28, 1982 2:00 P.M.

Presenter: Marilyn Clark, Coordinator, Adult Career Development and Learning, Education and Work Program, NWREL

OBJECTIVES:

1. To discuss key issues in generating management support for training activities in the workplace
2. To stress onsite needs assessment and planning as essential to training program designs that win management support
3. To provide participants with an opportunity to develop a training idea using a planning guide

CONTENT:

This workshop had two components. The first was a lecturette that cited the need for closer cooperation between education and the business and industry sectors to promote productivity growth. Employer-sponsored, on-site training is a growth area and one that can benefit from what postsecondary education has to offer. Educators planning to provide training or consultant services to business must be prepared to provide a strong rationale for training to management if they expect to market services to that sector.

The trainer should consider the following issues when assessing the need for training:

- Is there really a need for training?
- Who besides yourself has mentioned or identified a need for training?
- Is there a gap between the levels of technical or professional skills or knowledge employees possess and the levels of skills or knowledge the employees need to deliver an adequate performance?
- Are there solid indicators of the skills and performance levels the employees will need to acquire?
- Is the current organizational climate one that will accept and encourage employees to apply and polish their new skills and knowledge?
- Will the result of training solve an identified problem?

These questions should be a part of a needs assessment that either builds a rationale for the training or makes it clear that the proposed training may not be necessary nor appropriate.

Working with line management during the needs assessment and training development process is a key factor in winning support for the proposed training. This enables the trainer to use what is perhaps the most persuasive rationale possible: "Line management wants this training because it will improve productivity."

Also discussed were tips for presenting the case for training to top management. These included:

- The top manager won't have time for all the details, but will want assurances that the trainer has covered them.
- The top manager may not have the trainer's expertise and may need to be educated quickly with the essential information.
- The top manager may have other information that may send the trainer back to the drawing board to revise plans.

The second part of the workshop presented a Guide to Training Design. This guide leads the user through a planning process that considers such items as need, desired outcomes, clients for the training, organizational considerations, training program solutions, resources available, logistical considerations, roles and responsibilities, cost and evaluation of the training. Participants used a training problem provided by a member of the group to practice using the Guide.

INCREASING STUDENT OPTIONS THROUGH CREATIVE PARTNERSHIPS BETWEEN THE SECONDARY SCHOOL AND THE COMMUNITY COLLEGE

Thursday, October 28, 1982 2:00 P.M.

Presenters: Rex Hagans, Director, Division of Instructional Improvement, Northwest Regional Educational Laboratory

Don Fiser, Director, The Institute for Community Assistance, Portland Community College

John Pendergrass, Regional Vocational/Career Education Coordinator, Washington County (Oregon) Education Service District

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OBJECTIVES:

1. To identify the driving forces toward more high school/community college partnerships
2. To increase information about selected promising practices in high school/community college partnerships
3. To identify priority issues and action agendas for future partnerships

CONTENT:

The workshop was a combination of stimulus presentation and group discussion. The session began with each of the presentors discussing the partnership from their unique perspective: the research and development worker, the secondary school practitioner and the community college planner.

Rex Hagans gave a brief synopsis of relevant studies which have advocated expanded partnerships, noting especially that, according to a recent survey by NWREL, this recommendation was one of the very few arising from 11 major studies on ways to improve the secondary school which was considered both desirable and practical by secondary principals in the Northwest. He summarized the reasons often set forth in favor of partnership as: (1) an increasing educational productivity, including "saving" a year in placement or job entry, avoiding duplication of effort and increasing efficiency through specialization; and (2) providing greater benefit to the individual through a more complete and flexible environment for the transition to adulthood.

Don Fiser then reviewed the increasing demand for high school completion and simultaneous enrollment at his institution, noting that both were taking the college beyond what it was receiving in reimbursement. Agreeing with the need for cooperation, both from the point of view of society and the individual, he pointed out that, at the current time, the mission of Oregon colleges, as defined in enabling legislation, only peripherally encompassed many of the areas and programs most in demand.

John Pendergrass then summarized seven problems which he felt were causing secondary educators to desire more partnerships: (1) reduced resources leading to reduced offerings; (2) increasing expectations from the business community for a better prepared graduate; (3) the increasing need to upgrade instructors in technical areas; (4) the problems of special certification for many technical instructors; (5) the growing "squeeze" being placed on electives by increasing graduation and college entrance requirements; (6) the present large number of dropouts; and (7) the fact that there is no clear, articulated path from high school-community college to university and/or occupation.

Don Fiser than summarized the strengths and weaknesses of several strong practices in the area of partnership. These included: (1) high school completion as a means to serve the "motivated high school dropout"; (2) planned joint curriculum utilizing high school instructors; (3) simultaneous enrollment, utilizing existing community college classes; and (4) high school contracting for a total program (often vocational).

John Pendergrass then discussed some promising practices in staff development which are underway in this area. These included: (1) joint evaluation and design of curricula in specific areas (electronics); (2) joint offering of staff development; and (3) joint development and use of work experience sites.

After a lively group discussion of the strengths and weaknesses of each practice, the group engaged in a "rating" of each area in terms of practicality and desirability. The "ratings" were as follows:

Most Practical	Most Desirable
o use of existing college curriculum	o planned joint curriculum
o joint development of work experience sites	o use of existing college curriculum
o joint staff development	o joint staff development
o high school contracting for programs	o joint development of work sites
o high school completion programs	o high school completion programs

The group concluded that the most important partnership agenda for the future should be the exploration of means to increase the incentives for more joint curriculum and staff development.

COMPUTER LITERACY FOR THE WORKPLACE: A "LOW TECH" ALTERNATIVE

Thursday, October 28, 1982 2:00 P.M.

Presenter: Dr. Judy Edwards-Allen, Director, Computer Technology Program, Northwest Regional Educational Laboratory

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OBJECTIVES:

1. To discuss the proliferation of the computer and technology in society and the world of work
2. To provide statistics about jobs and their current and future need for technical knowledge and skills
3. To discuss the current high unemployment rate and compare the skills of the unemployed to the skills needed by employers
4. To suggest some "low-tech" skills that could make the unemployed more employable
5. To examine creative responses to the "high-tech" challenge

CONTENT:

The format was a combination of lecture and discussion of alternatives for providing entry level technical skills for the unemployed or for retraining of employees.

Participants learned that by 1985, 75% of the jobs available will require computer skills of some kind. They also learned that by 1990, 685,000 new jobs are projected in the field of high technology. Yet, fewer than 1/4 of these jobs will require advanced technical degrees.

More and more of the work of a data processing manager, for example, involves face-to-face dealings with employees--helping them understand appropriate uses of new technologies. "User literacy" has become a major corporate challenge. This trend will become more pronounced as technology becomes more "user-friendly." Technology itself is reducing the need for high-tech geniuses.

The emerging need, them, is for a large core of workers who are not afraid of technology, who can use it appropriately in their work, and who can help others deal with issues surrounding technology in the workplace.

The skills needed for this entry level "user" literacy include:

Low Tech Skills

- Keyboarding
- Data entry and processing skills
- Word processing and list processing
- Microcomputer knowledge and skills
- Jargon and vocabulary
- Using computer to solve problems
- Storing and retrieving information
- Using telecommunications
- Sending and retrieving messages
- How to read technical manuals

The driving force behind technological literacy training programs is the need to increase workforce productivity. As society is increasingly technological, a "technologically literate" staff can provide the competitive edge for companies struggling to stay in business.

Acquisition of "low-tech" skills can be a starting point for retraining the unemployed, to give them the "competitive edge" in seeking new employment.

This conference provided an excellent opportunity to discuss the combination of the provocative theoretical and pragmatic educational issues.

The opportunity to formulate in one's mind those factors that might facilitate awareness building about global interdependence was a highlight.

John Dahlberg
Coordinator of Graduate Studies
in Education
Boise State University
Boise, Idaho

ACTION PLANNING STRATEGIES

Remarks by Tom Olson, Director, Division of Planning and Service Coordination, Northwest Regional Educational Laboratory, Friday, October 29, 1982, 8:40 a.m.

I am perhaps overbilled as a "speaker" for this morning. What I would like to do is to (a) provide a brief transition from the content of yesterday's presentations, and then (b) set the stage for the remainder of the conference today.

Yesterday we heard some powerful, and sometimes "assumption busting," analyses of the new contexts in which we work. You heard a global perspective from Dr. Goulet, and you heard a U.S. perspective from Dr. Leu. Both speakers challenged us to examine new realities from the perspective of interdependence. These new perspectives provide us with an important contextual backdrop to consider "action planning strategies."

Now there are those cynics who might say that the words "action" and "planning" are mutually exclusive. (I'm reminded of my son's attempt at explaining what I do to a friend of his. He said, "Well, my Dad doesn't really do anything. He just plans.")

Today we shift from an understanding of the new contexts in which we find ourselves to some specific suggestions for action strategies. To help do this I would like to use the Naisbitt Group's seven "megatrends" as the transition point. As you may know, the Naisbitt Group publishes Trends magazine and does futures oriented environmental scanning for a number of organizations. The seven megatrends* which are having or will have major impacts on education are:

1. The transition from an industrial society to an information society is now complete.

   For example, in 1950 60 percent of the work force in the country "made something." That's now down to 17 percent. The new industry is "information." The Naisbitt Group suggests that education is to the information society what banks were to the industrial society. The challenge to the education sector, it seems to me, is to consider how well we have integrated this new trend into the way we do business.

2. We are moving inexorably from a centralized to a decentralized society.

   Significant shifts in federal education policy (or maybe "non-policy") are calling our attention to this trend. Because of this, state and local education agencies are experiencing new challenges in decision making and problem solving. But again the question for today is, "How seriously are we taking on these new challenges?"

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*Adapted from "The Future's Seven 'Megatrends': The Information Society Brings Change." School Board News, October 13, 1982.

3. We are shifting from a national economy to regional economies with great emphasis on global trade.

   Yesterday Dr. Goulet called our attention to this accelerating emphasis on world trade. Even small U.S. "mom and pop" businesses are dealing with overseas suppliers and customers on a daily basis. Are we integrating this trend into our instructional programs? Are we assisting business and industry to cope with these emerging necessary global perspectives?

4. We are shifting from an "either-or" society to a "multiple options" society.

   This trend has tremendous implications for education systems--both from the recognition that there is growing competition among public and private providers of education as well a from the viewpoint that education systems need to restructure industrial programs to provide greater assistance in wise "choice making."

5. We are shifting from "force technology" to a "high tec/high touch" society.

   Pac-Man's overwhelming popularity is a simple manifestation of this trend. But the popularity of the current movie "E.T." is an even greater manifestation of the high touch as well as high tech syndrome. Are we recognizing both dimensions of this trend as we consider appropriate uses of technology for instruction?

6. We are focusing more directly and clearly on accountability in all phases of life.

   Educators need not be reminded of this force--particularly when we observe the public and legislative demands to do more with less as we constantly adjust our budgets to lower levels.

7. We are shifting from hierarchical society to a network society.

   This is one trend which is only beginning to receive some much needed attention. But in any one mind it's really at the core of the necessary ways we structure our new action planning strategies.

   Dean Tollefson and I will be discussing the networking concept as the major theme of our "Action Planning Strategies" workshop later this morning.

It is clear that as we shift our view of these megatrends from "esoteric futures" to the "here and now," the more we recognize the need for action planning strategies as real survival techniques rather than "planning as gamesmanship" as it largely was in the 1960's and early 1970's. I am confident at what you will hear today will clearly indicate that "action" and "planning" do indeed fit together and indeed are requirements for survival in the 1980's and beyond.

Thank you.

JOHN ELORRIAGA
PRESIDENT AND CHAIRMAN OF THE BOARD, U.S. BANCORP

Friday, October 28, 1982 9:00 A.M.

Introduced by: Dr. Ethel Simon-McWilliams, Associate Director, Northwest Regional Educational Laboratory

EDUCATION AND BUSINESS: A JOINT RESPONSIBILITY

After that introduction, I don't know if I should get up here. You know, I guess most of you are with junior colleges. And I say unashamedly to the people at the University of Oregon and the University of Pittsburgh and the University of Washington, where I studied, that the best school I ever went to was Boise Junior College.

Now it's Boise State University and a four-year school, but it was a very, very great school, and I'd like to share with you an experience that I had there. I'm a boy from a town of 200 people. (Well, it was 300, and went down to 200; now they have opened up a mine in Jordan Valley, Oregon and it's about 500.) So when I went to Boise Junior College, I had to take 28 hours because I had to take geometry and algebra and a few things that I didn't have in high school, and you know a boy that's used to milking cows and pitching hay doesn't know much about literature. One of the courses that I had to take was Modern Lit., and the Dean of Women was my teacher. I made an analysis one day about something and I got an A on the paper and on it it said, "This shows real insight beyond what I've seen." And so two or three weeks went by and I got another paper back from my teacher, and she gave me a C- and said, "I should flunk you. Come in and see me." So I went in to see her and she just really tore into me and said, "Here's this paper that shows really some in depth-thinking and here's one that you just sluffed over." And she said, "John, you're mentally lazy." Well, that hit me so hard, and it was so true; so many times in my life, going through school, I was mentally lazy, and when I did something good, I figured I could sluff off and get by the next time; it was easy; it wasn't going to be any problem. And that lesson stuck with me all my life. So that after that when I did feel mentally lazy I tried to give extra effort, and found out that it felt so good when I did, and got something done, that I really attribute to that woman my success in life--if I have success in the business world--because that's what's always pushed me on--pushed me to do something greater. Well, I wrote to her and told her, about five years ago. I received more rewards than I'll ever receive in any other way with her gratitude and thanks and she wrote me her life history since those days. It was the warmest feeling I think I've ever had. But it's true.

And there was one other teacher there. I say this because I have such a feeling for teachers, and that was my English teacher who wrote a recommendation for me to a company in Boise that I was looking to get a job with, and he said, "John Elorriaga can accomplish anything that he wants to." And you know, I thought, "Me! It's just impossible for somebody to think or say something like that about me!" And that gave me another jolt--that I had to live up to what that guy thought about me. His name is Dr. Gottenberg. And so those two experiences in my life are just about the epitome of feeling that I could possibly have and the reasons why I maybe have done some good somewhere along the line throughout the years, and I sure want to tell you about that. I think you'll appreciate as teachers that the real values in life are what you do for other people, and if you can in some way mold someone's life a little bit, it's going to be more rewarding than any amount of money that you can stack up in a bank account.

When I was teaching at Multnomah College years ago at night and one of the boys coming to school, whom I asked to read a question, came up to me and said, "Mr. Elorriaga, I wish that you would have it so I wouldn't have to read questions. I can't read these questions aloud." He couldn't read, and he was a smart, smart boy. And so I said, "Well you're going to have to read those things, and we're going to practice, and then after each class you stay with me for a half hour each night. Remember that you're going to do it, and if you can't do it, we'll arrange some more time." And before the end of the year, that kid was reading well, doing a great job--he's a brilliant kid. Nobody ever taught him how to read. He was going through high school, and here he was trying to take college courses without knowing how to read, and that was a smart boy. Now if it was someone that had trouble--real trouble--than I probably wouldn't have felt so disappointed. But I felt good when that boy started reading those questions and giving me the answers in class just like he was an A student. He did turn out to be a B- type of student. He had a lot of work to do, but it was a real start for him and he sure appreciated the extra effort given there.

You know, I'd like to talk to you today about several categories, and I'd like to break it down into seven categories.

1. How involved is industry in education right now?
2. What's happening nationwide in industry sponsored education?
3. What are our needs today?
4. What will our needs be tomorrow?
5. Are Oregon's higher education institutions preparing for the future?
6. How is Oregon currently preparing for the future? and
7. What more can be done?

You see I have all the questions, and all the answers--No. Well, how is industry in education right now? Businesses and industry today have poured billions of dollars into developing and maintaining training departments to teach the skills they require. U.S. Bancorp spends $750,000 a year annually on direct training; our costs are over two million dollars a year but on direct training, we spend $750,000. And this doesn't include on-the-job training, outside seminars or the costs involved in having an employee away from his job. It does include in-house seminars, advanced banking schools and college related courses. These range from in-house courses in sales and credit training, personnel training, clerical/secretarial training, management and supervisory training, to traditional college courses in accounting, economics, English, marketing.

Let me give you two examples of what we do in the education area that I think are the outstanding ones in our institution. We have a work/college program. We go around to high schools and in their senior year we try to hire the oustanding students in the high school. And we'll put them through college. They work a year and they go to school for a year, until they're done. Now that has been an outstanding program for us and we have been doing it since 1950, with good results. Now you might not think that they are good results, but we go to these children that can't afford to get a college education--they're good students in school--and we say to them, 'We'll put you through school; we'll arrange the funds for you to go through school; and when you get through, if you don't want to stay in banking, don't--because that isn't the place to be. But if you think you want to be a banker, we'll put you through school." We've put 581 students through school. We lost 354 of them. We have 123 that have graduated in that program. We have 25 more that dropped out of the program but still work for us. Now that's about a 23 percent retention rate and that sounds bad, but to us it sounds good. We have a president of an independent bank that came out of that program; we have an executive vice president that came out of that program; four senior vice presidents; we have a lawyer; we have a vice president in commercial loans; five VPs in various positions; three vice presidents and branch managers; nineteen other branch managers; twenty-one branch officers; twelve other officers and so on. The ones that dropped out of the program, but working with us (the 25 I mentioned)--one's a lawyer, one's a vice president and branch manager and so on down the line. We've been supplied with wonderful people doing a great job in our institution, and the loyalty they have goes on forever.

Now how about the ones that quit? The ones that quit and decide they don't want to go on and be a banker, go out into industry and have good jobs and are great customers of our bank. We've put them through school, so we're just as happy as can be with that program.

The other program that I think is outstanding that we have is the GBE program and we work in conjunction with Portland State. That program started in 1974 and so far we've had 304 graduates. There have been 11 graduating classes. We currently have two classes in session. These employees that go into that general banking education program must apply for that program, and they must be recommended by their managers. So really the ones that come into this program already have some demonstrated management capabilities. Forty-two of those people were officers when they began the program; 102 became officers after completing the program; and there have been 420 promotions of the people that participate in that program. We think it's a wonderful program and you ought to see those people--and what we do is we teach them how to run a bank--we teach them my job. And you know, it's amazing how many don't want it after they go through it. But I have competition every day from these people, and it's just wonderful because they come up with so many ideas after they get out of this program. They go back to their offices and they come up with ideas that I don't think we'd have ever gotten communicated to management in other areas of the bank, if they hadn't had that kind of management thinking. Well, those are two examples but I think that they are wonderful examples. I think that we are so lucky to have started those programs. I think that's the reason why we have such a good staff. Ethel has talked about what success our organization had. That's the reason. Because the people out there doing the job are the ones that are educated and know how to do it and care about the people they serve, and that's the kind of people we hire--the ones that care about others and want to help.

Another example is at Tektronix. I think it's a great example. They're a leader in industry sponsored education. About 75 percent of the firm's 20,000 employees (actually they have about 23,000 employees worldwide now) have taken advantage of the company's educational programs. In 1981, 10,000 employees registered for one or more of 600 courses that were offered out at Tek. Currently students are spending one half million hours in Tek's classes. You probably think that is not typical. It is typical. Hewitt-Packard, I think, has a better program; Intel has a great program. These kinds of programs are known throughout the United States. I think what is not typical is the banker's program. We have an American Bankers' Association educational arm that is nationwide and ongoing and in many cases gives college credit. And students that go to school in Portland, Oregon can continue that education whether they are in New York, Los Angeles, Chicago, or wherever. I think it's a wonderful arm of our organization.

Well, what's happening nationwide in industry sponsored education? In 1981, 21 million adults or 13 percent of the total United States adult population were involved in adult education activities. About 60 percent of these were job-related, and in 58 percent of these cases the courses were provided or paid for by the employer. Currently there are 50 bills pending before Congress related to job education and training.

So, what are our needs today? Recently, an executive from a large western computer hardware company was in Oregon to see about expanding into this state. He decided that it was impractical because there is a lack of ongoing educational training opportunities for his engineers. As a result, the state missed the chance for economic growth and the academic institutions lost a lot of additional revenue. We are beginning to see a severe lack of high tech manpower because educational opportunities are inadequate. In the United States we have at least 14 million people out of work. But we also have 1 million skilled jobs that can't be filled. In 1950 more than a third of all industrial jobs in the United States could be and were done perfectly well by those who did not have a high school education. By 1980, that figure was about five percent, and falling fast.

What will our needs for tomorrow be? Peter Drucker recently stated the demand for education is actually going up, not down. What is going down fairly fast is demand for traditional education and traditional schools. Economics, student needs and our new understanding of how people learn are bound to break the traditional education monopoly, just as trucks and airplanes broke the monopoly of the railroads. By 1990, office workers in industry will outnumber farmers and laborers combined. Chase Manhattan Bank recently projected an increase in staffing of 140 percent to 180 percent by 1990. Currently, only 20 percent of their jobs are filled through campus recruiting. A new study for the Education Commission in the United States estimates that in 1990 about 2-1/2 million students will graduate from high schools in the country's 16,000 local school districts alone. The report says unless public education is improved, particularly in teaching students to think and reason, when those 2-1/2 million people graduate, 2 million of them (or about 80 percent) will be unemployable because they will be technologically illiterate.

Are Oregon's higher educational institutions prepared for the future? In August of 1982 the Oregonian stated, "Lack of support for higher education and noncompetitive faculty salaries are causing a drain of brains and talent from Oregon to other states and to private business." Gerald Leinwand, who just recently resigned as President of Western Oregon State College in Monmouth, recently told the Oregonian, "I came here thinking Oregon had a good reputation for higher education, but it has a better reputation outside the state than it deserves." Kenneth Light, President of Oregon Institute of Technology until this summer, when he became President of Lake Superior State College in Michigan, recently told the Oregonian, "Oregonians and their legislators don't place a premium on higher education. They view higher education as a luxury. Here in Michigan the intellect of the human being is regarded as one of the prime assets of the state." The University of Oregon is now the highest priced public university in the western states for in-state residents. Oregon State University is only slightly lower on the list and is well above the next highest. College tuitions in Oregon's state supported schools rose 40 percent during the 1981-82 school year. An average in the past years has been 20 percent. Oregon ranks 40th among the states in its level of university salaries. These comments and statistics reflect a feeling of many Oregon academics. They may not accurately reflect the way Oregon is positioning itself for the future.

What are we doing for the future? Well, we've taken some active steps toward forming business and education partnerships. You know, I was on the state Board of Higher Education for one year; and after that year, you know what I told Vic. I couldn't stand it. Things weren't being done properly. We had another Chancellor at that time. He's not here now. We have a new Chancellor and we have a new board and new chairman and a new study going on to determine what we really have to do, and I'm telling you they're really working on it. I'm really pleased about what's happening. I think you're going to see some positive gains in this state in that area. Vic Atiyeh, our Governor, recently announced a $1 million cooperative venture between state government and private industry to raise the quality of high technology education in Oregon.

Included were plans to channel $400,000 to Portland State University to build its program in circuit design and computer engineering. You hear more and more about this high technology and so on. Well, that's where people have the opportunity to get the most jobs, and that's why the funds are being funneled more into that area right now and that's where the people in the technology business part of the world are really more active than anywhere else, I think. There were also plans to create a science and engineering board for education and research. This board should strengthen and more effectively utilize our higher education system and its unique asset in fostering industrial economic development. Tektronix, for instance, alone has given Portland State University seven chairs, $20,000 each, to supplement some teachers' salaries so we can get the good ones out here and keep the good ones out here. We're going to have to do more and more and more of that.

Now the educational institutions seem to say we need a chair. Well, how much is a chair?..Well, we need $2 million so that the income from that $2 million will pay a teacher's salary. Pretty tough to get $2 million out of something. But $20,000 a year for 5 years--not bad. So I think that's the approach that we have to have to get industry to help supplement those salaries in our system and we are going to have to do it. There isn't a shadow of a doubt in anyone's mind that's in any way involved in the educational procedures or serious about it, I think, that doesn't agree with that program. So I think that that is really starting to move and will be helpful. The Governor's newly formed Economic Action Council, funded entirely by the private sector, has recently taken similar steps. One of the first was to make available approximately $75,000 for educational activities aimed at retraining Oregon's labor force. The Council challenged seven community colleges in the most economically depressed areas to develop proposals for training, and in one case, we will provide half of the tuition if the students will go for the other half because just giving it doesn't seem to be the answer. I happen to chair that council. We've given away $700,000 already. We have $250,000 more to go. If you have any good ideas, we'll listen to them.

Also, there are currently 112 acres in Beaverton being developed into the Cornell Oaks Corporate Center, a high technology campus. It's being designed to meet the needs of the high tech industries. It's the first of its kind in Oregon and a prototype for Oregon's future as a high tech center. We invited the Governor of North Carolina and the president of a junior college to tell us how they did it. It was a wonderful story. We're going to take many pages from their book and follow their advice so that we can get something going in Oregon that way.

Well, what more can we do? Educators can work to make colleges a transition point from teaching theory to the practical application of that theory by adding business experience as a requisite to graduation. We can encourage collges and businesses to join together in practicums where the students work in businesses while they are going on to school, and encourage businesses to hire teachers during the summer so that they can gain practical business knowledge. Educators can begin to teach some of the business basics, such as how to write a resume, prepare for an interview, and research the business with whom the student will be interviewing. Now maybe some of you think you do that, and you do, but you ought to see them. You ought to see them. Very few people can write a resume. We have to concentrate even on that. That will teach them something--to get out there and get a job. And you know, if the students were inadequate in their thinking processes, that would be something, but they're not. They're smart kids that come along and they can't even write a resume.

Educators can ask more business people to teach classes or to guest lecture. They are able to bring life experiences into the classroom. I've been to the University of California in Santa Barbara, and there probably isn't a school in this room that has invited me out there to talk to their class. I've been asked by the University of Oregon twice to go there, and I'll go, and a lot of us will go if we're asked. All we have to do is be asked and set a time when we can do it. Be flexible. It's not being done properly. Day before yesterday I went out to Skyline School and talked to 40 seventh graders. Why did I go out there? Because I was asked to go out there. And those kids--you should have seen those kids. They asked smart questions, one right after another. Seventh graders--it was a career education type of class--just beautiful. And you know, there are so many of us that would do it if we were just asked. And I think it brings business alive to those kids. They won't forget. It will help.

Educators might even establish a faculty selection process that weighs at least in part the importance of practical business experience as a selection criterion. Educators in special education fields can contact training and personnel departments, and the department managers to discover their needs and views of education as well as the components of their current training and community outreach programs. You might add involvement wth the business community, business experience, or similar job dimensions to the performance review programs at schools and colleges. You might provide incentives for faculty members to do consulting work for companies. The incentive could be similar to that given for publishing in the professional journals. Consulting could be for a fee or as a service to the community. We could establish a process whereby those faculty members who do consulting work also share the details with the other interested faculty and students. We could locate business training and research departments on college campuses so they can better interrelate.

Educators can also encourage corporations to make a commitment to the community's education. One currently being offered at a U.S. Bancorp is a special education and training program for the handicapped. Currently employees in this program are training in data processing areas. The next two targeted areas are teller training and clerical/secretarial training--a business experience program for high school students not headed for college--and that is a jewel. Some years ago out at Jesuit High School when they put in that car wash out there (I got Dan Hanna to put that in there) I tried my darndest to get the school to give credit for kids working in that car wash that are going to school there, get credits in the classes. Everybody agreed to it, but it hasn't been done to this day. Well, why not? Why couldn't we do that in so many areas? Help the kids make a few bucks and teach them something about business that will really help them. You know in that one case something else came good out of it. Dan's son didn't have a very good relationship with his father. He really got interested in the business and they really got together and it really helped out the family relationships. These kinds of things come out of experiences like that.

I've told you about our work/college program, which I think is the best one that we have. We also cultivate a close relationship with the Urban League. We not only purchsse equipment for them but they refer employment applicants to us and they are always good employees. There are also additional programs for retaining migrant workers or Spanish-Americans and other minority groups for re-entrance to the work force. I hope that I've provided the message to you--that I really care about this business/education business. I've been working on it for years, and we just don't seem to get where we want to go. And what I'm really doing is appealing for your help. Go after it because you'll get it. They always blame the businessman for everything, it seems, because he doesn't spend the time to get into government activities; he doesn't spend the time to get into educational activities--the businessman is busy. It's tough to keep the organization going so you're going to do that on the extra timne that you have. Well you don't have any extra time, but you make it if somebody's after you to do it. And all the good businessmen that I know want to participate. So I'm appealing to you people to organize yourselves and come after us. We'll help.

Thank you.

EDUCATION AND BUSINESS: A JOINT RESPONSIBILITY
A FORUM WITH JOHN ELORRIAGA

Friday, October 28, 1982 9:30 A.M.

Facilitators:	Bob Archibald, Director of Cooperative Education, Portland Community College
	Don Fiser, Director, The Institute for Community Assistance, Portland Community College

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A summary of discussion points included:

1. Colleges and universities are continually faced with the challenge of recruiting and retaining qualified instructors, particularly in the areas of engineering, data processing, mathematics and business administration. This situation primarily exists because business and industry can pay salaries much higher than can education. It was suggested that business and industry make a concerted effort to help colleges and universities attract and maintain high quality instructors by offering relevant summer work that is adequately compensated.

2. Mr. Elorriaga suggested that business leaders are usually more than willing to speak and guest lecture at colleges and universities if, "only they were asked."

3. The idea was discussed that co-op programs should be developed between colleges and businesses that would exchange instructors working in industry for business managers and specialists teaching in colleges. These "short-term" co-ops would allow instructors to keep relevant and enable business people to contribute and understand the challenges and problems facing education.

4. Mr. Elorriaga was made aware that hundreds of program partnerships already exist in the Northwest between colleges and business in such areas as electronics, banking, data processing, health care, legal firms, utilities and retail companies.

5. The facilitators also discussed in detail the Cooperative Education Program and Institute for Community Assistance Program at Portland Community College. The forum participants were very interested and enthused about both programs.

ACTION PLANNING STRATEGIES

Friday, October 29, 1982 9:30 A.M.

Presenters: Tom Olson, Director, Division of Planning and Service Coordination, Northwest Regional Educational Laboratory

Dean Tollefson, Consultant, Creative Studies Center of the Northwest

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OBJECTIVES:

1. To identify major needs of postsecondary institutions prompted by new contextual realities of interdependence
2. To identify the factors contributing to the success of networking suggested by the recent research on collaboration
3. To provide suggestions for effective areas for networking

CONTENT:

The workshop agenda was as follows:

Item	Lead Person
Agenda Overview	Tom Olson
Identification of Needs Requiring Action Planning	Dean Tollefson
What Research Suggests About Networking	Tom Olson
Principles and Practices in Interinstitutional Networking	Dean Tollefson
o Between Postsecondary Institutions	
o Between Postsecondary Institutions and Business and Industry	

Participants initially identified some major needs and new realities facing postsecondary institutions. The needs identified can best be summarized as faculty development and renewal, enhanced instruction in technology, removal of institutional barriers for networking, greater collaboration with business and industry, and the need to enhance interdisciplinary efforts in instruction and faculty communication. Participants then engaged in a discussion regarding the relative advantages and disadvantages of "networking" as a strategy in dealing with these needs.

Tom Olson then provided a bibliography of recent research on networking and interorganizational collaboration . Based on these research findings, Olson suggested the following as key factors contributing to the success of networking:

1. Clarity about potential barriers and requirements among participating agencies
2. Shared decision making among participating agencies
3. Benefits to individual organizations, as well as the group as a whole
4. Demonstrated commitment and followthrough of participating members.
5. Clarity of intent, divisions of labor and rewards
6. Highly competent leadership who are not already overloaded
7. Establishment and maintenance of a formal communication system and integration mechanisms
8. Establishment of clear parameters within which activities occur
9. Equal participation, voluntary participation and interdependence
10. Trust and openness among participating agencies
11. Internal stability that encourages participating agencies to have a "freedom to risk"
12. Attention to the organizational autonomy and program visibility of participating agencies
13. Development of a common plan of action
14. A reservoir of personal energy to sustain progress during setbacks and conflicts

Dean Tollefson then provided a state of the art review of promising practices in networking among postsecondary institutions, and suggested that the following areas are promising "places to begin" networking:

- Cooperative purchasing
- Low enrollment programs

- High technology
- Areas where high systematization is necesary (e.g., libraries)

The most important feature of stimulating and maintaining effective networking, according to Tollefson, is leadership.

> "The road ahead for postsecondary education is perilous. The extent to which it proves to be defeating or enlightening will depend greatly on the foresight and attitude of the leadership in the journey."*

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*Dean Tollefson, "Identifiers for Twenty-First Century Learning Communities" in Competition and Cooperation in Higher Education, Washington, D.C., American Council on Education, 1981, pp. 127-131. See also Benefits of Collegiate Cooperation: University, Alabama; Council for Interinstitutional Leadership, 1979 and Sharing Collegiate Resources: University, Alabama; Council for Institutional Leadership, 1981 for descriptions of strategies and techniques for interinstitutional networking.

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COMPUTERIZED GUIDANCE AND INFORMATION SYSTEMS

Friday, October 29, 1982 9:30 A.M.

Presenter: Dr. Valerie McIntyre, Regional Manager, Northwest Council for the Advancement of Experiential Learning

OBJECTIVES:

1. To demonstrate the ENCORE computer program which assists adults in identifying career and education options, based on prior experiences and personal skills and preferences.
2. To present an overview of other programs which have a similar design (CIS, Discover and SIGI), noting the groups of people for which each is most applicable.

CONTENT:

The presenters took the group of participants to the CAEL offices nearby, and demonstrated the ENCORE program. It is a five part, three-hour program to help adults determine how their past studies and experiences can be applied to planning a re-direction of career. There are several advantages built into the computer program: the student's privacy is protected via access to the program by password; the program can be stopped at any point and re-entered at any point, so that the three hours can be completed in a number of short sessions; the information already entered can be recalled and edited if desired.

ENCORE is an interactive decision-making tool, and prepares a person for counseling on the appropriate path to pursue towrd a new career. Various life roles, skills, and values as entered by the student are plotted by the computer and related to appropriate possible careers/courses of study. These can also be plotted on a "World of Work" map, which shows the areas the person is most likely to succeed in.

The software can run on computers with Z-80 chips and can be leased through CAEL.

SIGI is more appropriate for the young adult just out of high school; it depends more on values and predictions than on experiences. Discover provides a systematic program of guidance through computer assisted simulation exercises in areas of values clarification, decision making and career classification through the provision of extensive occupational and educational information.

CIS has an ability and interest assessment file, a description file on more than 200 occupations, names of people who will talk to prospective students about their particular occupation, a file on the skills needed and ways to prepare for each occupation, and a program file on the post-secondary education and training available in Oregon.

Good Conference. There was a fine mixture of thought provoking theory and exposure to promising practices

Bill Laidlaw
President
Whatcom Community College
Bellingham, Washington

PAUL D. LINTNER
PRESIDENT, ELECTRO SCIENTIFIC INDUSTRIES

Friday, October 29, 1982 1:00 P.M.

Introduced by: Forrest Rodgers, Director of Marketing, Marylhurst College for Lifelong Learning

FROM BARRIERS TO PARTNERSHIPS

I accepted the invitation to speak to this group today in hopes that I might be better able to communicate some of the needs of the high technology community to you, the educators. The thrust of this talk is to deal with the barriers that we in the high technology business area are finding in working with the educational community. More importantly, I will discuss what we in Oregon have done to break down some of the barriers and to form partnerships. You know, it is a little difficult for me to talk about barriers because I basically am a positive person and that's a negative term. But I know that they do exist. Today I hope that we may be able to mutually find ways to minimize their effect--present and future.

I'm a believer in people and I think I represent the contingent of the business community that feels the same way. The reason is that people with the proper education and training bring us ideas that lead to products that will build growing businesses that will employ more and more people. You hear a lot about securing financing, particularly for new business enterprises. But as a businessman, I assure you that if one can find people with the proper product ideas it is relatively easy to formulate business plans which will attract the entrepreneurs and cause them to invest funds, thus forming and building thriving businesses. Thus, I say people properly educated and trained are the product: you are the designers and manufacturers; we are the buyers and consumers.

As background information...I did several years of electronic design work, moved into selling and managing. Since I have you as a captive audience, I'll do a little selling on our company. But the things I will mention actually will apply to all of the electronic companies in the area. We engineer, build, sell and service sophisticated computer-controlled electronic instrumentation and processing systems using lasers. We also build robotic type devices to place and remove parts from these machines. The machines we manufacture are primarily used in the design, testing and manufacture of electronic components. We employ about 700 people in the Portland area and our subsidiary companies. Sales volume is approximately $45 million per year worldwide, and we sell our products worldwide with approximately 35 percent going outside the United States. Interestingly, only about 1-1/2 percent of our products are sold in Oregon or Washington. Therefore, we could be termed exporters of product and importers of money in Oregon. In Portland we have approximately 150 people with Bachelor of Science or Bachelor of Art degrees in Engineering sciences, several with Masters Degrees and quite a few with Doctoral degrees. Of these 150 degreed people, engineers, computer engineers or software specialists number about 75. The remainder are employed in the commercial areas doing selling, application work and various modes of support activities.

I had the pleasure of being the chairman of the American Electronics Association last year. The Oregon Council constitutes approximately 60 member companies, ranging from some very small companies of three or four employees up to the giants of industry--Tektronix, Intel, and Hewlett Packard. These companies primarily manufacture high technology products requiring a considerable amount of engineering, ranging from oscilloscopes, heart pacers, light control systems for rooms such as these, computer enhancements, various types of computers themselves, and peripherals. We sell to, and buy from, each other to a considerable extent. Totally our member companies employ about 28,000 people in Oregon. At the present growth rate of this group, these companies will easily employ more than 50,000 Oregonians within four or five years. Truly high technology companies are becoming a major source of employment in Oregon. My talk will center on the needs of engineering and computer science education. However, I want to quickly assure you that we have a similar need for people educated to handle the associated areas of commerce, manufacturing, selling, human resources, training, etc. Another important thing is for these people to have communicative skills, both in the written and verbal form. As I told a group last week, it would be ever so nice if they could even spell. This is a great deficiency of the engineering group. I should not forget that they must have the ability to work positively in groups and teams towards common objectives, because in our industry few jobs can be performed in isolation.

Preparing for this talk, I consulted recent papers on the state of affairs in postsecondary education. I've learned that the decisions to be made in the next few years will be among the most critical ever faced by the American higher educational institutions. These decisions, properly made, offer the possibility of a new form of education. I've learned it definitely appears that education is a growth industry just like high technology. In other words, more people are requiring more education for more years of their increasing life span. I learned that education has goal and associated management problems. That really piqued my interest because we have management problems. For instance, it's not clear whether you are strictly in the education business or maybe you are also in the training business. Your management is not sure just exactly how to handle the problem/situation and whether to go along parallel paths or intersecting paths with industry. I learned that there is a great deal of concern and discussion in the educational arena related to the distinction between credit and noncredit learning. I also learned, not to my great surprise, that television and other electronic communication links are becoming much more powerful and effective tools for teaching; teaching not only within the four walls within a given street address but in carrying education to a much wider audience. When I think about it, these things mean to me that change is every bit as evident in education as in industry and probably even more difficult to deal with. I do think in general that industry is better able to cope with change and meet its requirements than is education. Perhaps this ability of industry to deal with change has contributed to the erecting of barriers, of noncooperation between industry and education. So here are some of my thoughts on the barriers of various sorts that I believe generally exist.

1. Education has not been sufficiently impressed with needs for quality in postsecondary education, particularly as related to the needs of high technology companies. Education hasn't made many conscious efforts to attract and employ professors with nationwide reputations who will bring along quality associates and together develop programs that are really excellent.

2. Many institutions seem to be very provincial and feel because they are in Oregon and we are an Oregon industry we will come to them. They simply do not seem to realize that it is only a 1-1/2 hour plane ride to the Bay area where we can talk with educators who are foremost in their fields. In our own company we have formed a relationship with Texas A&M, if you'd believe that, located between Dallas and Houston, many more air miles away. Why Texas A&M? It's because these people are really industry oriented and produce graduates well educated and trained to understand and work in and contribute to the semi-conductor industry where we basically are. When we go down there, we're received with open arms and those educators can talk with us about our educational and technical problems with great understanding, and are really helpful. They can, and have, quickly tailored individual educational programs to meet specific requests.

3. In terms of providing products for us in high technology, many institutions are deeply rooted in their particular pieces of geography in Oregon and serve only the needs of those localities to produce graduates that are trained in areas of questionable interest to a high technology industry. This has a great deal to do with the politics of the situation, I believe. The fact is that many legislators come from sparsely populated areas where industry is not. However, because of these legislators an imbalance of money flows to institutions in these localities that of course do not have much chance to serve high technology industry. True enough, there are many examples of cooperative programs such as night courses near industry, but what I am saying is that if education is to serve high technology industry, the institutions really need to be located close by.

4. Another thing that seems to be a barrier is that community colleges and universities are not sufficiently aligned in terms of their courses. They need to develop cooperative programs with easily transferrable credits from, let's say a community college, to an institution of higher learning and then on to a graduate institution. I know that community colleges have different objectives compared to higher level institutions. However, it really seems to me that these barriers should be broken down and that people should be able transfer credits with ease.

5. Another barrier revolves around just out and out leadership. Frankly, I'm afraid that several department leaders and leaders of various postsecondary institutions simply are so deeply rooted in the past and are so comfortable or maybe so frustrated they just don't want to reach out. Oregon industry is changing, with high technology replacing forest products and agricultural operations as the state's largest employer. In other words, I think educators should realize this change and that they are suppliers of products and that they can and should reach out to new industry and find out what products the customers are needing. Then they should tailor their programs to meet those needs.

6. Another barrier that may be more subjective in nature than the others is that schools may not really trust industry. Many companies have set up competitive teaching organizations, constructed buildings, hired staffs at premium salaries, grant degrees, and in many, many ways look like schools that are competitive to the traditional postsecondary institutions. I suspect many educators are wondering just exactly where this will all lead and whether they should be very cooperative with this competitive element.

7. Finally, some of the educators I know seem to spend a great deal of time bemoaning the latest budget cuts and inactions of their upper management and not enough time in developing strategies and action plans to circumvent the perceived barriers. They seem to think and talk almost entirely of the magic term FTE. Frankly, they seem to be reactive rather than proactive.

By now I'm sure I've touched some tender nerve ends surrounding the basic process of the functioning of the postsecondary institution. However, my comments are really intended to simply illustrate situations. Since we are the consumers of the product, namely the graduates of your institutions, I think we the customers should have some say on how that product is designed and built. However, I want to emphasize that I do not believe industry should really be involved in the educational business. And I don't know any industrialists who really believe that either, I might add. I think we should say what we want, but I do not believe we should give advice in detail on exactly how the product should be designed and manufactured.

Okay, these are some of the barriers we have observed. What can we do about them? I want to be particularly positive about this next portion of the talk. I want to present ideas about refining the processes employed by our educational institutions, discuss updating the thinking of industrialists and educators, describe a process that at least has worked in one instance for obtaining more understanding.

I've been critical of education; now let me turn my comments to the high technology industry. Since I am the only representative of that industry here, I think I'm safe in saying these. I think we in industry have been faulty and we have been totally consumed in trying to make our organizations go--to keep them going and profitable. Frankly, during these last couple of years, we have been operating in a survival mode, with little time or energy to devote to community affairs. But we have to plan for the future. People are our future. And we need to work closely on nurturing that most precious product. Basically, I think industry should be willing to meet the educational organizations more than half way.

1. We should present to you some very clear group forecasts of all our industries, of our needs in a process that is done annually. The forecasts should span several years and yield information on how many and what kinds of students we expect to hire in a given year. We should tell you the expectations we have for these graduates, what their responsibilities would be, what their career pathing will be. That should be very easy with appropriate planning on our part. You know we in industry are very, very good in strategizing and planning. Not true. It's a particularly tough process in any case, and it is really very difficult when we are dealing with people in an ever changing and rapidly changing world. But I do think we should make the effort on the industrial side. We've done it in the past. Many of our companies do it anyhow, and I think we can do it in the future and do a better job. I would like to know from you sometime this afternoon if this type of information would be helpful in your planning.

2. I think industry should put forth a lot more energy in understanding the processes involved in postsecondary education. I am very much in the learning stage concerning education and the intricacies of what you go through, but frankly I've heard too many people from business say, "Well, if those folks in education would only run their places on a businesslike basis, everything would be better." Right? Having learned a little bit about the educational business, I know that you have different norms, situations, pressures, objectives and a lot of history to either guide or impede you. I don't say what is being done in education is the way I would suggest doing it, but nevertheless I think we in industry have a lot of understanding to gain before we can really effectively understand you and work together with you.

3. I think industry should make special efforts to involve educators more in our respective businesses. This can take several forms. Primary ones that might be employed would include consultancy contracts for teachers, employment opportunities for teachers--part-time, summer work, fulltime, plant visits, and equipment demonstrations designed to teach the educators.

4. I think we in business should learn about the legislative process and become involved in it. The main reason is that our legislators control the purses. We all know that a considerable sum of money is required to operate effective educational programs. Talk all we want about the efficiency of new delivery systems that an electronic nature will bring to us; the fact is, with the requirement to turn out an increasing number of students, a tremendous amount of funding will be needed from the public sector. As you all know, the funding comes via government, the legislators. A lot of those people are teachers. In Oregon, I am told,

it is about 18 percent. But I'm not so sure they really have accurate evaluations of the needs of postsecondary education. I do know that many of them have little or no appreciation of the needs of business.

5. Several years ago, Oregon business put forth considerable effort to enhance postsecondary education, and now I'm talking particularly about situations at Portland State and the genesis of the Oregon Graduate Center. Some of these programs didn't progress too far, and many of the leaders perhaps became a bit disillusioned with the whole effort. But I say a new window has opened now and those business people should join the effort.

6. A few businesses, particularly larger ones, have set up cooperative situations with education that work fairly well in their individual cases. But they may not address the larger long-range problems. These organizations should evaluate their programs and coordinate with area needs.

To summarize my thoughts on industry, I think we simply have not worked as closely with the educational sector as we should have. This is changing; at least in Oregon it is changing. Industry/education partnerships are forming. Let me tell you about one of these changes.

As you may recall at the first of my talk, I mentioned that the American Electronics Association and the Oregon Council of same (I mentioned those names)--the AEA is a nationwide organization of some 2,000 separate high technology companies. Totally, their sales volume represents nationwide something like $225 billion. At a board of directors' meeting approximately a year and a half ago we adopted a resolution that set up a campaign in funding to enhance engineering education in the U.S. The effort was focused on finding ways to increase the capabilities of educational institutions for supplying industry with a greater number of quality graduates, primarily in the area of engineering and computer sciences. In terms of overall funding for this program from AEA it was suggested that each company donate 2/10 of one percent of the company's annual sales to higher educational purposes. This could be in the form of direct gifts, salary supplements, equipment donations, etc. Nationwide this should amount to something in excess of $50 million. Right now it is in the area of $10-$12 million as we are getting started on a nationwide basis.

Now let's go to Oregon. Upwards of a year ago the activity in Oregon began to intensify when one of our prominent legislators became interested in the fact that Oregon schools are not receiving sufficient support to produce high technology graduates. In January 1982 Representative Vera Katz proposed an action plan as part of a 1982 blueprint for Oregon economic recovery. Her proposal suggested the establishment of a public/private consortium of Oregon's postsecondary educational institutions and leaders of high technology industry to develop a high technology educational action plan. This consortium was to advise the Educational Coordinating Commission of Oregon which in turn was charged with preparing an inventory, needs assessment and program evaluation of current engineering, high technology educational offerings. In addition, it was to recommend the most efficient and cost efective method of enhancing this field of study. And in particular, it was--I think this quite unusual and important--to designate the funding of the programs it recommended. Incidentally, the persons from industry involved in this consortium were also to raise $500,000 to match the $500,000 that Representative Katz hoped would come from the Oregon Legislature. You can see we're in sort of a faith business right about there.

I participated in setting up a meeting with the leaders of some of the larger organizations in our Council--namely, Tektronix, Intel, Hewlett Packard, Floating Point. After brief discussions, it was evident that there was sufficient interest to go ahead with the program. So we did because a few necks were stretched out at that point, including mine. The arithmetic of the situation said that if the member companies (these are the AEA 60-member companies in Oregon) donated approximately $18 per person for each person employed by them in Oregon, we would be able to raise the $500,000 matching fund. We knew that we probably couldn't sell this program to our members unless we have developed a well defined plan that specifically focused these funds on higher educational needs. In other words, we knew that industry would not contribute unless they knew that the monies would go to the specific programs that would benefit them. Some important parameters of the program were these.

1. Focus. We felt that the total of $1 million that would be available could not be spread very far and we needed to focus on development of electronic engineers and computer engineers at selected institutions.

2. With the preponderance of our member companies being in the tri-county area in or around Portland, we felt the effect of the money spent needed to be, at least in the early stages, focused on schools in that area. Interesting statistic--probably 24,000 of those 28,000 jobs that I mentioned in the high tech industries are located within a radius of 10 or 15 miles of this room.

3. We believed that the state schools could play a major part in this program, but there were several private institutions with certain distinct capabilities that could be very essential to its success; indeed that the program should contain definite cooperation between the public and private schools.

4. We believed that the program should strive for very high quality. We think in terms of establishing steeples of excellence in given institutions with the thought of MIT and Stanford as examples. We considered that we were establishing a basic program framework and taking only the first steps in a process that would require several years.

We presented a draft of these concepts to our members and got a great deal of support deemed sufficient to carry forward with the program. We also checked our thoughts with several educators, department heads, school administrators, etc., and received encouragement. Frankly, it seemed like everyone was waiting for a plan. At this point, Governor

Atiyeh formally established the consortium for high technology education. To represent high technology industry, a team from the electronics sector was named to it; also named was a member of the state board of higher education, the president of the Oregon Graduate Center to represent the independent college sector, the chairman of the Educational Coordinating Commission of the state, and last, but not least, and particularly because he is sitting right in front of me, John Anthony of Portland Community College. Also the staff members of the same Educational Coordinating Commission were made available to assist in the effort.

In the first portion of the educational organizational process the group from industry listed our planned outline as described above and found the other members to be in general agreement. Next it was decided that since industry was supplying the $500,000 matching fund, we should prepare a document that gave in detail the needs of our members. We four people from industry set about doing this and prepared a survey asking how many graduates our companies expected to hire within the next five years. Within six weeks the survey was returned and we prepared a document which described the needs of our industrial group. And we found it to be generally acceptable to the consortium with some modifications. Briefly, that survey indicated that five years from now the 60 member companies in the Oregon area with indicated growth would be needing approximately 800 graduates per year. Those are primarily electronic engineering and computer science graduates--800 per year.

At this point we believed we were sufficiently well along to contact the schools and commence the process of evaluating capabilities and programs with our needs. We wanted to have direct access to them and learn what programs they already had or could develop that would respond to the five year industry requirements. We sent out these needs documents along with an invitation to the appropriate department heads of the University of Oregon, Oregon State, University of Portland, Portland State and the Oregon Graduate Center, to come meet with us in discussion over a two-day period. Meanwhile a very significant thing happened on the Oregon scene, which definitely suggested that the window of change had arrived. This was the arrival of the new Chancellor of Higher Education, namely Dr. Bud Davis. Prior to his taking office, on one of his early visits to Oregon, three of us from industry met with him to describe our thoughts and soon recognized that he was very much interested in our program for high technology education. He had previously participated in a similar program in the state of New Mexico. Dr. Davis quickly coordinated the efforts of the state schools and one document was prepared which was presented at our July meetings with the various institutions. Incidentally, we were very pleased that the presidents of Oregon, Oregon State, University of Portland and Oregon Grad Center as well as the deans of the various schools attended the meetings. From the public sector the document was presented by Dr. Davis, and it suggested an amazing thing; namely, that Oregon state send professors to Portland State to help them start up their programs in high tech education. Very viable programs also were offered by the Oregon Graduate Center, and the University of Portland plus the community colleges. There were many aspects of intercooperation evident in these presentations. Frankly, we were most pleased.

After the meetings, the consortium spent some intensive weeks evaluating the programs, then prepared a listing of which institution would receive what portion of the $1 million. This plan was then presented in a refined state to the September 2nd and 3rd meetings of the Emergency Board along with a listing of the monies that had been pledged or turned in towards the $500,000 matching fund. That was just to add a little bit of believability. The Emergency Board quickly approved and the plan went into action.

Here are some of the results. To date industry has raised approximately 96 percent of the required $500,000. Plans are underway seeking professors to start on the approved program. The consortium is busy refining the methods that will be used to monitor the selected programs. Also, we have set up an advisory group consisting of representatives from the various schools, one from the Chancellor's office, and an industry member. We think we are definitely on our way for this early portion of the program and are fleshing out the framework of the process that will carry us out into the future. Remember, we think this is a several year program. I'm very impressed by the cooperative nature of most of the institutions and personnel. There are a few folks in a few institutions that feel they have been left out in the process, and we have tried to assure them that this is only because we are in the very early stages and that we need to focus our limited funds. In other words, we feel that we first must take care of the needs of our member companies in the northern end of the Willamette high technology corridor.

As we think about the future, the consortium should be concerned with several questions in my mind.

1. Can we persuade the Oregon Legislature to allocate sufficient funds for education in the future? 2. How much funding can industry raise over the years? And for how many years? 3. How do we break down the remaining barriers? 4. Are the educational institutions really going to continue to increase cooperation with one another? 5. Can our program succeed with the present makeup of the State Board of Higher Education?

Industry pockets are relatively shallow and the money needs are really great--thus, most of the funding must come from the public sector. And we in industry must find ways to lever our contributions to get the most out of the public sector. I think the consortium must find ways for industry and education to develop increasingly closer ties as we move into the future. The cooperative spirit is there, but we all must work hard to enhance it. Concerning these barriers, I am confident we can significantly lower them, if not break them down entirely. People would like to cooperate. They need and want to follow a plan. I think we have such a plan. I am hopeful that this cooperation can occur simply because I know several programs are already underway amongst the institutions. In particular there is a two plus two plus two program forming at Portland Community College, University of Portland and the Oregon Grad

Center. I feel we must have a different constituency in the State Board of Higher Education. At present there is no person on the board from the high technology sector; precious few from industry, I think. But I think this must be corrected in the not too distant future.

What about the future? What about our fears? One fear is that we will not be able to maintain sufficient energy to apply it to our efforts with sufficient interest to keep this thing going. We realize that bureaucracy is very powerful, well entrenched and has the ability to slow down little pieces of a program by working all around the perimeter and finally eroding away the center. This must not be allowed to happen.

Another fear is that sufficient monies will not be appropriated by the Legislature in a short enough time to really make these programs go forward. We'll be filling positions with some rather high powered people who want to accomplish things quickly. They will need funding to do this. Their interest is up. The funding will be required to keep that interest kindled and the spirits alive.

Another fear is that we may not be able to find ways to make this a totally well rounded program. We stress the needs for high technology engineers and technicians and people of like caliber in the computer sciences engineering areas, but we also need people of various types to support these technologists. I am talking about people in the accounting sector, sales and purchasing, and other commercial areas. These people should come from your institutions with an education and appreciation of the needs of high technology.

Another fear is that the quality of education will not be of the highest caliber and enable the students to be recognized throughout the country. We need to have high quality programs to produce the necessary graduates to keep the spirit and money flowing in the interests of our companies involved. These graduates will give impact to the product design programs within those companies so that our products can compete on a worldwide basis. You know that we would very much like to hire our graduates from the Oregon institutions, but it is not all that difficult for us to seek graduates from other schools in the country. One of the fears here, of course, is the great number of exceedingly good graduates coming from Japan. We simply must have quantity and quality that matches those graduates.

In summary, barriers can fall. Postsecondary education/industry partnerships can be started and with work gain strength and growth. The time is now. The window is open for change. Thank you.

HIGH TECHNOLOGY PARTNERSHIPS
A FORUM WITH PAUL LINTNER

Friday, October 28, 1982 1:30 P.M.

Facilitators: Forrest Rodgers, Director of Marketing, Marylhurst College

Angel Pilato, Manager of Corporate Education, Tektronix, Inc.

The discussion following Mr. Lintner's speech was facilitated by Ms. Angel Pilato, manager of corporate education for Tektronix, Inc. The theme of Mr. Lintner's presentation focused on the possibility for creative partnerships of education providers (colleges and universities) and users (business, specifically electronics companies in the extended Portland area). The discussion centered around three major factors: assessing the corporate education and training needs, assisting in the development and accreditation of industry-specific training programs, and the need for liberal arts "skills" in business.

Mr. Lintner approached the needs assessment from his marketing background, and suggested direct approaches to begin partnerships: identifying specific skill areas that need developing (secretarial, data processing, etc.), offering curriculum and program design help, and arranging for faculty internships to keep them up to date with industrial developments. Ms. Pilato stated that many companies want to get out of the eduction business and encouraged participants to assess and market their programs which will help accomplish that.

The topic of industry-specific programs was addressed, with Mr. Lintner reviewing the offerings of the American Electronics Association (AEA), which provides extensive technical training to member companies. The AEA/Oregon is very active in education, and recently completed a survey of educational needs of members. The survey indicated a need for 925 electronic engineers and 1209 computer science graduates wthin the next 5 years; this did not address, however, the continuing education needs of employees. Areas of need might include design engineering (circuits and chips), systems analysis, and software design and programming. Many colleges offer these--or related--courses, but do not have a delivery system which meets the needs of the electronics company. Mr. Lintner suggested new approaches to scheduling might increase the opportunities for colleges.

The role of the liberal arts in high technology was addressed, and Mr. Lintner identified the following as services which liberal arts colleges could provide: management education (finance, accounting, decision-making, organizational behavior, etc.); communication (for use in marketing, corporate communications, and interpersonal and organizational communication); and cultural and intercultural education. He emphasized the "internationalization" of the electronics world, and the need to prepare employees for living and working in foreign cultures. While high tech firms are not heavily recruiting people with liberal arts backgrounds, they are hired in areas of marketing, finance, communications and purchasing. The need to know the language of high technology was stressed, however, as a skill these people should have or develop.

Both Mr. Lintner and Ms. Pilato suggested that the future for education and business partnerships is bright, and that their industry is eager to work together to optimize the resources and talents of the institutions.

MACHIAVELLIAN DIPLOMACY IN MODERN DRESS: ARTICULATION AND TRANSFER BETWEEN POSTSECONDARY INSTITUTIONS

Friday, October 29, 1982 1:30 P.M.

Presenter: George A. Delaney, Dean of Educational Services, Skagit Valley College

OBJECTIVES:

1. To increase awareness of the growing importance and numbers of community college transfer students to four-year institutions
2. To review conflicting literature on the performance of community college graduates upon transfer, including the presence of "transfer shock"
3. To review models of articulation and transfer currently in use in various states
4. To review historical and current efforts in the state of Washington to ease the process of articulation and transfer through a voluntary system

CONTENT:

Participants were introduced to the growing importance of community college transfer students. Parallel to the rapid growth in the number of community colleges and the corresponding number of academic transfer students, community college students are providing an increasing percentage of upper division students in senior colleges and universities. Examples included 44% of all full-time upper divison students at Arizona State University came from community colleges, and 57% at Western Washington State University.

Research literature on the performance of community college transfer students is spotty and often contradictory. While some studies, most notably at the University of Washington and UCLA, indicate that community college students perform less well than "native" students, there is a growing number of studies which question these findings. Recent literature indicates that community college students who transfer with an AA degree perform as well as native students in comparable majors.

Over half of the states have attempted to ease the transfer process by the development of articulation and transfer processes and agreements; participants reviewed ten of these which vary widely from informal general agreements to voluntary compacts to transfer processes mandated by state agencies and legislatures.

Considerable attention was devoted to a presentation and discussion of the historical and current efforts in the state of Washington to ease the transfer process through voluntary agreements. These efforts have been directed by the Intercollege Relations Commission, composed of representatives of all accredited two and four year, public and private, colleges and universities in the state. Guidelines for the acceptance of Associate Degrees were first developed in 1971 and, after several major modifications, led to broad acceptance of Associate Degrees, including junior status and satisfaction of General University Requirements for the Baccalaureate degree.

Recent concerns for the quality of those Associate Degrees led to a statewide meeting in October of community college Deans of Instruction and college and university academic vice presidents and heads of GUR committees. The purpose of the meeting was to provide a forum for broad discussion of the role of General Education in the Associate and Baccalaureate degrees and specific discussions on the direction for modification of the AA Guidelines. Continuing discussions are being held, with the future of the acceptance of the Associate degree at stake.

EFFECTIVE LEARNING STYLE UTILIZATION

Friday, October 29, 1982 1:30 P.M.

Presenter: Joe Youngbluth, Counselor and Instructor in Psychology, Mount Hood Community College

OBJECTIVES:

1. To provide an overview of the characteristics and benefits of various learning style models.
2. To identify instruments for diagnosing and prescribing for individual learner differences.
3. To discuss methods for utilizing learning style information in the classroom.

CONTENT:

Definition: Learning Styles--Characteristics, cognitive, affective and physiological traits that serve as relatively stable indicators of how learners perceive, interact with, and respond to, the learning environment.

Rationale: The rationale is that education has attempted to meet the individual learner's need in a variety of ways in the past, but normally the individual and specific differences have not been dealt with; that is, a learner's unique characteristics have been ignored and improperly served by classroom techniques.

Overview of the Field: Current recognition of learning styles has resulted in the appearance of over 35 instruments for diagnosing and prescribing for individual learner differences based on style. Current instruments were reviewed from a handout entitled "Assessing Student Learning Styles: An Overview" by James W. Keese of NASSP (National Association of Secondary School Principals).

Considerable time was spent overviewing the distinctive characteristics and benefits of the various learning style models with particular emphasis on Witkin's "Field-Independent, Field-Dependent" Model, Dunn and Dunn Model, Kolb Model and the Hill Model of Cognitive Mapping.

Utilization of Learning Style in a Classroom Setting: There are essentially two distinct ways of utilizing learning style information:

1. Equip the teacher with information on individual differences and the responsibility for managing appropriate curricula according to style.

2. Equip the student with self-knowledge of his unique learning style and assist him in more effective management of the learning environment.

The conference was a comprehensive and direct attention to issues and trends that colleges and universities need to plan and implement delivery systems. The presenters represented a cross-section of the theoretical and the practical approach in the development of these delivery systems, both within the college community as well as off-campus.

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The Northwest Program Development and Coordination Center is located at Highline Community College near Seattle and serves postsecondary and higher education in the Pacific Northwest. Functional areas of Center expertise include consortium formation and management; planning and conducting workshops and conferences; provision of technical assistance; resource development and information sharing services; and facilitating linkages between postsecondary institutions and other educational and/or community organizations. Among the programmatic areas of Center involvement are Cooperative Education, International Education, and Consultant, Trainer and Management Training.

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